

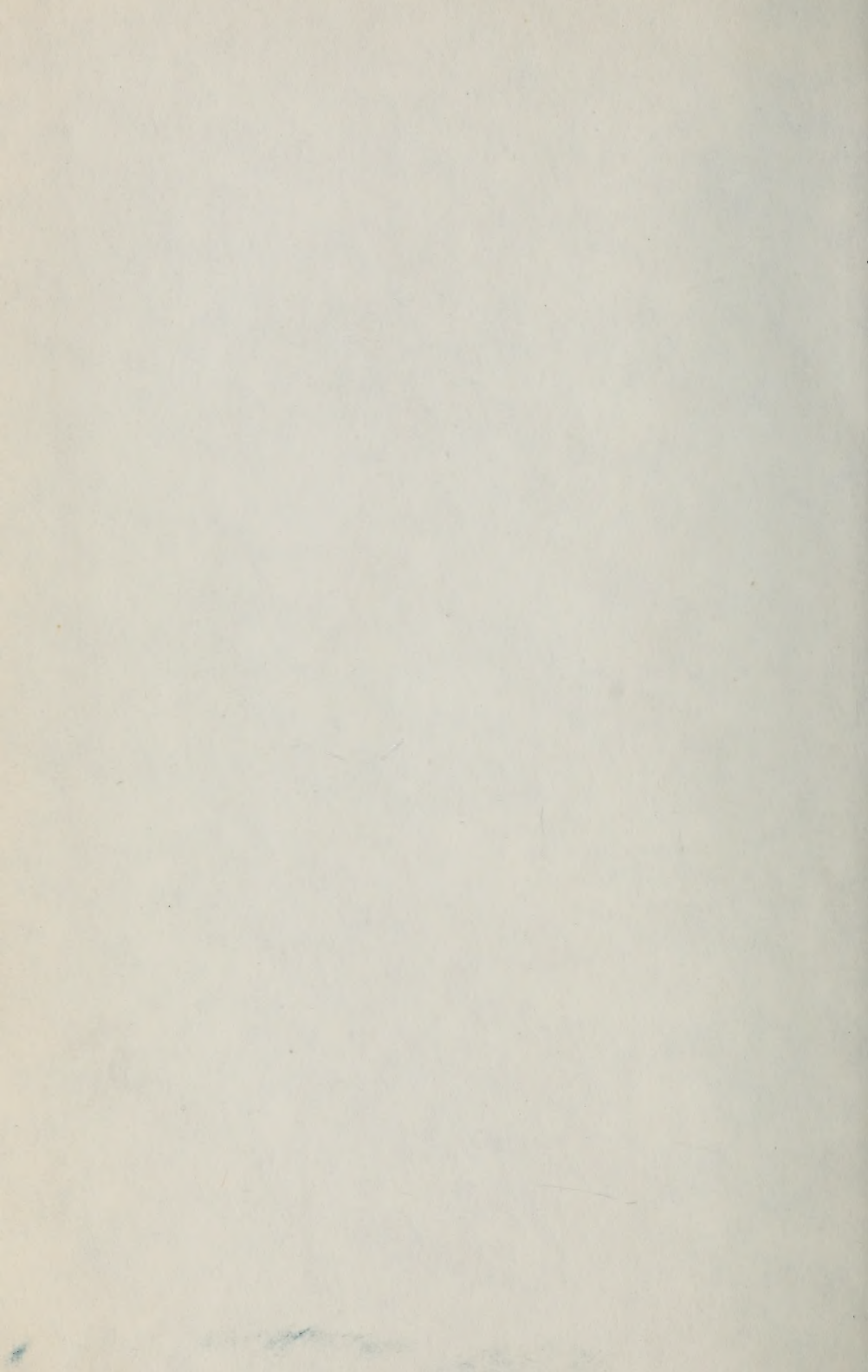
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Vol. XI

No. 3

THE BULLETIN
OF THE
ALABAMA
POLYTECHNIC

This volume is bound without _____

_____ 1918/19 _____

which is/~~are~~ unavailable.

MAY, 1915

26
Entered as Second-Class Matter, March 29, 1915,
at the Post-Office, at Auburn, Ala., under the Act
of August 24, 1912.

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915-16

Vol. XI

No. 3

THE BULLETIN

OF THE

ALABAMA POLYTECHNIC INSTITUTE

AUBURN

CATALOGUE
1915-16

ISSUED MONTHLY
BY THE INSTITUTE
MAY, 1916

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Main Building

CATALOGUE
OF THE
ALABAMA
POLYTECHNIC INSTITUTE

STATE COLLEGE

FOR THE

BENEFIT OF AGRICULTURE AND THE MECHANIC ARTS

AUBURN, ALABAMA

1916

1916
Post Publishing Company
Opelika, Ala.

CALENDAR FOR 1916-17-18

1916	1917	1917	1918
JULY	JANUARY	JULY	JANUARY
S M T W T F S	S M T W T F S	S M T W T F S	S M T W T F S
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9 10 11 12 13 14 15	14 15 16 17 18 19 20	15 16 17 18 19 20 21	13 14 15 16 17 18 19
16 17 18 19 20 21 22	21 22 23 24 25 26 27	22 23 24 25 26 27 28	20 21 22 23 24 25 26
23 24 25 26 27 28 29	28 29 30 31	29 30 31	27 28 29 30 31
30 31			
AUGUST	FEBRUARY	AUGUST	FEBRUARY
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27 28 29 30 31	25 26 27 28	26 27 28 29 30 31	24 25 26 27 28
SEPTEMBER	MARCH	SEPTEMBER	MARCH
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17 18 19 20 21 22 23	18 19 20 21 22 23 24	16 17 18 19 20 21 22	17 18 19 20 21 22 23
24 25 26 27 28 29 30	25 26 27 28 29 30 31	23 24 25 26 27 28 29	24 25 26 27 28 29 30
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OCTOBER	APRIL	OCTOBER	APRIL
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DECEMBER	JUNE	DECEMBER	JUNE
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31		30 31	30

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COLLEGE CALENDAR 1916-17

Summer Session	June 8 to July 19, 1916
Examination for Admission Begins.....	Monday, Sept. 11, 1916
Session Begins	Wednesday, Sept. 13, 1916
First Term Begins	Wednesday, Sept. 13, 1916
Mid-Term Examinations	Oct. 23, 24, 25, 1916
Literary Society Celebration	Nov. 30, 1916
First Term Ends	Thursday, Dec. 21, 1916
Second Term Begins	Wednesday, Jan. 3, 1917
Mid-Term Examinations	Feb. 10, 12, 13, 1917
Senior Class Exercises	Thursday, Feb. 22, 1917
Literary Society Celebration	Thursday, Feb. 22, 1917
Second Term Ends	Monday, March 26, 1917
Third Term Begins	Monday, March 26, 1917
Senior Theses Reported	May 1, 1917
Sophomore Class Exercises	May 1, 1917
Field Day	May 1, 1917
Final Examinations Begin	Saturday, May 26, 1917
Commencement Sermon	Sunday, June 10, 1917
Annual Meeting of Trustees	Monday, June 11, 1917
Alumni Day	Monday, June 11, 1917
Junior Class Celebration	Monday, June 11, 1917
Festival of Lights, 8 P. M.	Monday, June 11, 1917
Commencement Day	Tuesday, June 12, 1917

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WM. F. FEAGIN, Superintendent of Education *Ex-Officio*

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HARRY HERZFELD (*Fifth District*) Alexander City, Ala.
OLIVER R. HOOD (*Seventh District*) Gadsden, Ala.

TERM EXPIRES 1923

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J. A. ROGERS (*Sixth District*) Gainesville, Ala.
C. M. SHERROD (*Eighth District*) Courtland, Ala.

TERM EXPIRES 1927

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W. H. OATES (*First District*) Mobile, Ala.
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R. W. BURTON, Secretary.

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- LEE IRWIN DAVIS, *Laboratory Assistant.*
- P. F. BAHNSEN, *Lecturer on Clinical Diagnosis and Lameness.*
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Committee on Examination of Special Students—Professors Wilmore, Dunstan, Duggar, Blake, Hinds.

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Committee on Grounds and Buildings—Professors Wilmore and Walker.

Committee on Alumni Appointments—Professors Shi, Petrie, Ross, Wilmore, Duggar, W. C. Blasingame.

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HON. A. W. BELL.....	Anniston
HON. J. A. ROGERS.....	Gainesville

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J. F. DUGGAR, Director of Experiment Station and Extension.

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E. F. Cauthen, Associate.
M. J. Funchess, Associate.
J. T. Williamson, Field Agt.
R. U. Blasingame, Agr. Engr.
O. H. Sellers, Assistant.
H. B. Tisdale, Assistant.
F. E. Boyd, Assistant.

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A. B. Massey, Assistant.

PLANT PATHOLOGY:

_____, Pathologist.

VETERINARY SCIENCE:

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L. F. Pritchett, Assistant.

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ist.
J. C. C. Price, Associate.
_____, Field Agent.

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Soils and Crops.
C. L. Hare, Physiological
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C. A. Basore, Assistant.

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F. L. Thomas, Assistant.
E. A. Vaughan, Field Asst.

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Miss Madge J. Reese, Asst. *
J. C. Ford, Assistant. *
I. B. Kerlin, Assistant. *

ANIMAL HUSBANDRY:

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H. C. Ferguson, Assistant.
J. P. Quinerly, Assistant.
E. Gibbens, Assistant.

* In co-operation with United States Department of Agriculture.

The Institute is a distinctive school of science and its applications; being also the State College for the benefit of Agriculture and the Mechanic Arts, established by the State in 1872 by endowing it with the land grant appropriation made by the United States Congress in 1862.

The leading object of the Institute, in conformity with the act of Congress and the acts of the State Legislature, is to teach the principles and applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts; and at the same time the discipline and liberal education obtained by the study of language and other sciences are not neglected.

All students are required to study the English language. The Latin, French, Spanish and German languages are also taught, and opportunity for their study is offered to students in any course.

The special and technical instruction given is thus based on a sound, general education.

In its different courses of education, work of great value to the youth of the State is accomplished by fitting them by a thorough science-discipline, in which manual training in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the faculty. The Institute thus endeavors to educate as well as to instruct, to form character as well as give information of value.



Langdon Hall

LABORATORIES AND FACILITIES FOR INSTRUCTION

The Institute possesses facilities for giving laboratory instruction in history, Latin, and the departments of applied science:

COLLEGE OF ENGINEERING AND MINES.

I. Civil Engineering.—A flourishing department of civil engineering has existed in the Institute since its foundation in 1872. The department occupies four rooms; office, lecture room, and spacious drawing rooms. A large amount of practical work is given the students of this department in field work.

Summer Course.—An attendance upon two sessions of the four weeks' summer course which offers practical work in plane and higher surveying and in engineering, is required of the students taking civil engineering.

The department is equipped with transits, levels, compasses, plane tables, tapes, chains, hand instruments, and other necessary equipment. For the summer work there is a complete camping outfit consisting of wall tents, folding camp cots, stools, cooking utensils, dishes, etc.

II. Electrical Engineering.—In the engineering building four rooms and two offices are used by the department of electrical engineering. Two rooms are class rooms, another is used for the telephone laboratory, and the fourth is a laboratory for electrical measurements.

The wiring in this building is arranged so that alternating and direct currents of various voltages for power, lighting, and experimental purposes can be delivered to any room.

In connection with the laboratories there is installed a repair and construction shop furnished with a variety of hand tools and with power-driven machine tools.

A large amount of electrical testing and measuring apparatus as well as commercial machinery has recently been installed in the laboratories.

(a) The electrical measurement laboratory is furnished with a variety of resistance boxes, bridges, galvanometers, standard cells, condensers, etc., as well as two photometers. In addition to the laboratory instruments proper, just noted, the department is provided with representatives of most of the types of commercial ammeters, voltmeters, and indicating and recording wattmeters for A. C. and D. C. work. There is also a 30,000 volt transformer for break-down tests of insulating materials.

(b) The telephone laboratory is provided with a full line of telephonic apparatus, telephones, relays, condensers, plugs, jacks, lamp and other signals, etc., representative of the Bell and a number of independent telephone companies.

Single pieces are so mounted that they can be connected up in any desired manner and thus the connections of any particular system can be made up and tested out.

Twenty cells of Edison storage battery are used to furnish energy for a board equipped for common battery and magneto service with trunking circuits. This board is a standard 100-line board equipped with one strip of twenty answering and multiple jacks, ringing, listening keys, and cord signals for four cords.

(c) The laboratory is equipped with a large number of D. C. and A. C. generators, motors, and other appliances especially adapted for experimental work. In addition the equipment of the power plant is so arranged as to be readily available for purposes of instruction and investigation.

The machines for experimental work are arranged on testing platforms rendering them readily accessible. By means of a comprehensive wiring layout with individual connection boards for each machine, a wide variety of combinations of machines can easily be made.

The main power plant supplies power for operating all shops, and laboratories, pumping water, and lighting the town of Auburn. The connected motor load is a little over 250 horse power and about 100 kilowatts are used for lighting service. This plant therefore affords unusual opportunities for students to obtain practical experience in the operation of steam and electrical machinery under commercial conditions.

III. Mechanical Engineering.—The laboratory work is considered an important part of the course and is arranged as far as possible to illustrate and supplement the work as carried on in the class room.

The steam and heat engineering laboratory is located on the first floor of Broun Hall, and the following apparatus is available for instruction: A 35-horse power cross compound engine, especially arranged for experimental work; a surface condenser with air and circulating pumps attached; a 20-horse power slide valve engine; an electric head light engine; a 15-horse power steam turbine; steam pumps, hot and cold water meters, tanks, scales, indicators, calorimeters, thermometers, pyrometers, steam gauges and apparatus for testing steam gauges.

In the line of internal combustion engineering the following

apparatus is available for instruction purposes: A 12-horse power four stroke cycle engine using gasoline or kerosene, a 4 1-2-horse power four stroke cycle kerosene engine, a 2 1-2-horse power kerosene engine, a 2 horse power two stroke cycle gasoline engine, an Ericsson hot air engine, a motor driven air compressor with motor, a volume blower, and the necessary tanks, scales, indicators and other auxiliary apparatus necessary for making tests.

A refrigerating plant of 2 1-2 tons capacity, including ammonia condenser and cooling coils, brine circulating system, pumps, meters, weighing scales and all apparatus needed for a study of the refrigeration cycle. The plant is driven by a steam engine, and provision is made to measure the power delivered and steam consumption of the engine.

The equipment of the power house is also available for instruction and consists of the following: A 300-horse power poppet valve engine; a 160-horse power angle compound engine; a 60-horse power simple engine; a 200-horse power water tube boiler; a 100-horse power water tube boiler; two locomotive air pumps.

Another room on the first floor of Broun Hall has been fitted up for a laboratory for testing of materials. In it are installed a Riehle testing machine arranged for making transverse, compression and tension tests, and micrometer apparatus for measuring the deformation of the specimen under test, and an Olsen torsion testing machine with auxiliary apparatus. There is also provided a cement testing outfit consisting of a testing machine, sieves, briquette moulds, boiler, and other apparatus for testing the strength, setting properties, fineness, and specific gravity of cement.

On the second floor of Broun Hall is located a laboratory for testing fuels, furnace and illuminating gases, and lubricants. The present equipment consists of a Mahler bomb calorimeter and a Parr calorimeter, for determining the heating value of fuels, complete apparatus for collecting and testing flue and furnace gases, apparatus for determining viscosity, the specific gravity, flash point, the coefficient of friction, and other properties of lubricating oils. A small electric motor furnishes power for grinding samples, driving blower for air blast, stirring, and other such work.

IV. Mechanic Arts.—The instruction in shop work is used as an auxiliary in technical education, and as a school of manual training in the arts that constitute the foundation of most industrial pursuits. The work performed by the students is instructive in character, and is intended to give the greatest

amount of instruction in principle with the least repetition of operations, and the smallest consumption of time. The work is executed from drawings, and the instructor in charge of the class makes the lessons before the class, or gives such specific directions as may be necessary to enable the student to make them. This is supplemented by individual instruction.

All students in the freshman class take this shop work, three periods a week, each period being two hours long. The sophomore class takes two periods a week. The purpose is not to teach a trade, but to train the eye, the hand, and the mind to more perfect co-operation, a training which will be of value in any pursuit in life. This training involves the principles at the foundations of all trades, of equal value to the student who wishes afterwards to learn a trade.

Three-phase electric motors are used for driving the different shops, the motors receiving current from the large alternator in the power house.

(a) The wood department is located in a room 90 x 50 feet, and is provided with a surface planer, a variety saw, a swing cut-off saw, a boring machine, and a grindstone. There are in addition, thirty benches for carpentry work, with the necessary tools.

(b) The wood turning and pattern shop is located in a commodious room 40 x 60 feet, in the second story of the new power house. It is equipped with twenty-eight wood-turning lathes, a grindstone, a band saw, a buzz planer, a pattern maker's lathe, a double circular saw, a surface planer and a drum sand-papering machine.

In each of these departments special tools for occasional use are kept in a tool room for the purpose.

In addition to the regular carpentry tools in the benches each student is supplied with a set of chisels, and plane irons, with a locker to keep them in, and is held responsible for their care and condition.

(c) The forge shop is equipped with twenty-four down draft forges, with anvils, hammers, sledges, and other tools necessary for blacksmith work, including a punch and shear for cutting and punching iron, and a blacksmith drill. The blast is supplied by a blower driven by an electric motor. The smoke from the forges is removed through underground passages by a 60-inch exhaust fan and discharged into the chimney.

(d) The foundry is equipped with a 23-inch Colliau cupola, having a melting capacity of 2,000 pounds of iron per hour, the necessary molding tools for bench and floor work, benches.

a core oven, ladles, molding flasks, a foundry crane, etc. A special blower driven by an electric motor is provided to furnish air blast for the cupola. There is also a brass furnace with crucibles, crucible tongs and the appliances necessary for making brass castings.

(e) The machine shop is a room 30 x 100 feet, and is equipped with ten 14-inch, two 16-inch and one 18-inch engine lathes, one 10-inch speed lathe, a 20-inch drillpress, a 10-inch sensitive drill, a 16-inch shaper, two iron planers, one 22-inch by 5 feet and the other 26-inch by 6 feet, a back geared universal milling machine, with vertical milling attachment, a water tool grinder, a bench grinder, a universal grinding machine, a universal cutter and reamer grinder, a twist drill grinder, and two power hack saws. Four of the engine lathes have compound rests, three have taper attachments, and one is fitted with a turret and a large number of special tools and fixtures which practically convert it into a manufacturing lathe, and serve to illustrate the methods of manufacture by duplicate parts.

For chipping and filing, eighteen benches are fitted with vises and each student is supplied with hammer, chisels, files and such other tools as he may need, and a locker in which to keep them. A gasoline engine is installed in one end of the shop, and is used for driving when the steam plant is not running.

The tool room is supplied with general machinist tools, such as chucks, drills, reamers, taps, dies, gauges, jigs, and special tools. A convenient room is supplied with lockers for keeping clothes, and basins supplied with hot and cold water for the use of the students. The different shops are equipped with electric lamps, and current is furnished when necessary.

V. Mining Engineering, Geology, Mineralogy.—The Department of Mining and Geology occupies parts of the first and third floors of the east wing of the Engineering Building. On the third floor the department occupies four rooms and office. The four rooms are all of about the same size, occupying about 960 square feet of floor space each: (1) lecture and recitation room, (2) mineralogical laboratory, (3) geological exhibit room, (4) drafting room. The class room has a seating capacity of sixty-four. The drafting room can accommodate twenty simultaneously. Here instruction is given in mechanical drafting, the calculation and plotting of field notes and in graphical design of mine structures.

In the mineralogical laboratory there are accommodations for thirty-six. Each student is supplied with drawer, locker,

and the necessary equipment for studies in crystallography, mineralogy and lithology. In the exhibit room adjoining is maintained a good type collection of minerals and lithological specimens as well as working specimens. There is also a collection of fossils and casts illustrating historical geology. Other equipment of the geological department consists of wooden, transparent, and skeleton crystal models; specific gravity balances; contact and reflecting goniometers; a petrographic microscope and slides for both microscope and stereopticon lantern.

VI. Ore Dressing.—The ground floor is occupied entirely by the metallurgical laboratory. The laboratory is well equipped with ore dressing plants. The concentrating plant consists of a gyratory crusher, two sets of roll crushers, two bucket elevators, four trommels or revolving screens, two classifiers, four Hartz jigs, and a seven-foot Wilfley concentrating table.

The stamp mill is of full size Nissen type, circular discharge and interior amalgamating plate. The outside amalgamating plate is full size, being ten feet long. The stamp mill and concentrating plant are fed from their respective bins by two different types of automatic feed. The ore before entering the bin is crushed to proper size by a Blake jaw crusher. The model cyanide plant illustrates the leaching department of the cyanide process and the extractor box work. It consists of one solution tank, two sand tanks, with false bottoms and filters, one gold tank, and a set of extractor box compartments of the up-flow type.

Besides the equipment already mentioned there is an automatic sampler. The cement floor in this department gives a good surface for illustrating coning and quartering in the process of hand sampling.

A twenty-horse power motor is the source of power for this laboratory. Shafting, belting and gears of various kinds transmit the power to the various machines so that a large variety of mechanism is illustrated.

VII. Architecture.—The department of architecture is located in four well lighted rooms in the Main Building. A floor space of 2,250 square feet is occupied by a lecture room, 25 x 30, a large draughting room, 30 x 35, a room for freehand drawing, 25 x 25, and a library, office, and special draughting room, 15 x 30, all connected by doors. These rooms are well furnished with large, substantial drawing tables and extra tables for freehand drawing, fixtures and additional equipment; a collection of selected plaster casts of classic sculpture and architectural details, a large number of architects' drawings and

signed original plates, and several hundred examples of free-hand drawings of various sorts; a library of standard works and portfolios of plates illustrating details of decoration and composition; four hundred lantern slides and many photographs of notable monuments of architecture; manufacturers' samples and catalogues; and various current journals devoted to architecture and the allied arts.

VIII. Mechanical Drawing and Machine Design.—The department of mechanical drawing and machine design is supplied with equipment for teaching mechanical drawing, descriptive geometry, kinematics, and machine design.

A convenient cabinet is supplied with a complete set of Schroeder's descriptive geometry models for demonstrating the principles of descriptive geometry and mechanical drawing. A small reference library and a library of selected catalogues of manufacturers, which is being established for the use of students in advanced machine design, occupy a suitable case. A Beck vertical wall file, 36 x 48 inches, for filing commercial blue prints, is filled with selected blue prints furnished by prominent manufacturers, and is made use of by students in machine design.

A number of kinematic models and a large collection of engineering specialties, sectioned to show interior, which were donated by the various manufacturers, occupy a sectional case, and are used in elementary work in machine design and mechanical drawing. The filing envelopes, which contain the students' drawings, are kept in alphabetical arrangement in a case of drawers.

This department is equipped with an outfit for making blue prints, consisting of two sun printing frames 18 x 24 inches and 30 x 42 inches, each mounted on a car and track and suitable conveniences for washing and drying the prints.

All students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. Four large well-lighted drawing rooms which will accommodate (at one period) two hundred and fifty students, are provided with tables, lock boxes, etc. The drawing rooms have been equipped with one hundred and fifty new drawing tables of the most modern pattern.

COLLEGE OF AGRICULTURAL SCIENCES.

IX. Practical Chemistry.—The chemical apparatus recently purchased for the chemical laboratory consists of a full supply of the most improved instruments for practical work and in-

vestigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to the first class laboratories, there have been imported a new and improved Schmidt and Heinsch's polariscope, ten short-arm balances of latest pattern, Bunsen's spectroscope, Abbe refractometer, and other instruments for delicate and accurate work.

The investigations that are undertaken in this laboratory by scientific experts in connection with the work of the agricultural experiment station, are of special value to advanced students, and afford them unusual opportunities to learn the methods of scientific research.

The building contains a large general laboratory that accommodates eighty students, a special laboratory for seniors that will accommodate forty students, a lecture room with a capacity of one hundred and fifty seats, and nine other rooms, all appropriated to instruction and research in chemistry.

The State chemical laboratory for the official analysis of fertilizers is connected with this department.

X. Agriculture.—The agricultural experiment station, established in connection with the Institute, where experiments and scientific investigation relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professors in the field where lectures are delivered in the presence of the objects discussed, and during the year exercises in practical agriculture of an educational character are given the students who enter upon this course of study.

The farm contains 304 acres.

XI. Botany.—The department of Botany occupies the western half of the third floor of Agricultural Hall. The rooms in use include a lecture room having seats for sixty-four students, a general laboratory accommodating forty-five students, a smaller laboratory for bacteriology and pathology accommodating twenty students, two small laboratories for professors and advanced students, two offices, a dark room, and store room. The general laboratory is supplied with microscopes, glassware, and the general equipment of apparatus and materials necessary for gross and microscopic work in plant morphology. The equipment for work in plant physiology and pathology has been very materially increased by the installation of much new apparatus needed for quantitative work in these subjects. These additions include autoclaves, sterilizers, incubator, dry-

ing oven, automatic water still, constant temperature baths, and ovens, Kjeldahl nitrogen determination apparatus, distilling and extraction apparatus, and many smaller pieces. These accessions to the equipment provide facilities for accurate work, under controlled conditions, in the chemical phases of plant physiology and for cultural studies in bacteriology and plant pathology, and permit expansion and development of the courses offered in these subjects to a degree commensurate with their importance.

The greenhouse of the department has a floor space 30 x 110 feet, with an adjoining laboratory room 30 x 30 feet. It is used for experimental work in plant pathology and plant physiology. The facilities provided are sufficient to permit the growth of ample material for class use in these subjects as well as for the investigation of special problems by the staff.

The botanic garden contains a fairly representative collection of the native trees and shrubs of the state, and it is planned to make a collection of native medicinal plants. A portion of the garden will also be used as an outdoor experimental plat for the growing of materials employed in the work of instruction or in research.

XII. Pharmacy.—The laboratory of this department occupies the first and second floors of the annex to the chemical laboratory, and is provided with a sufficient supply of drugs and apparatus necessary for instruction in pharmaceutical preparations. The equipment for the laboratory includes a Laurent Polariscopes; a Pulfrich refractometer; a vacuum distilling and drying apparatus, consisting of 1-2 horse power air pump, vacuum chamber, condenser, and Bruhl receiver for fractional distillation under diminished pressure, a three-horse power electric motor, a complete outfit for organic combustion work, and three chemical balances.

On the third floor is located the lecture room, storeroom, and drug mill room.

The new pharmaceutical laboratory on the basement floor of the pharmaceutical building is fitted with steam and has a full equipment for research work in pharmaceutical chemistry.

The students work in the laboratory with the professor from five to eight hours, six days in a week.

XIII. Horticulture.—A well lighted and heated one-story brick building adjoins the greenhouses. It affords space for about 40 students at one time for practical work in grafting, seed germination, seed testing, transplanting, grading, packing, spray mixing, etc. It contains also a complete equipment for instruction in canning. The two greenhouses, 20 x 80 feet

are modern in construction. They contain a varied collection of the leading bedding and decorative plants, and afford facilities for practical instruction in plant propagation, the forcing of vegetables and cut flowers, and greenhouse management. Hot beds and cold frames of cement construction are also at hand. Instructors also make use of the experimental orchards, vineyard, garden, and ornamental plantings on the grounds of the department for practical instruction. Accurate experiments in the culture of various fruits and vegetables adapted to the state are constantly in progress. The departmental library embracing many of the standard works, magazines, bulletins and other equipment are accessible to advanced students under the usual regulations.

XIV. Entomology.—The department of Entomology is well equipped with apparatus for the microscopic work in entomological subjects. An excellent equipment for photographic and photomicrographic work is provided and instruction in these subjects will be given as occasion may arise. The laboratory work is closely related to the lecture work in most cases. Special attention is given to the structure and classification of insects, designed especially to familiarize the student with the principal groups in which the insects are divided, and to give a basis for the selection of a proper method of treatment for their control.

The laboratory work includes also practical exercises in the preparation of the most important insecticides with proper types of constructing apparatus for applying various insecticides, and in a general way, making the student familiar with practical insecticidal work. There are also various exercises in the collection of insects and in the study of various pests which occur in the vicinity.

A reference library containing many general works upon entomology and important publications of the national bureau of entomology and of the state experiment stations is always accessible to students.

XV. Animal Husbandry.—The animal husbandry farm contains about 260 acres; upon this farm is a dairy barn which accommodates eighteen cows, and a beef cattle shed. The students visit the barns and sheds with the instructors and are thus afforded an opportunity to study the various breeds of live stock and to do stock judging work. In addition to the pure breeds of cattle and swine upon the farm, there are always graded and scrub animals, which are used in experimental work in feeding, breeding, etc. All of this stock is used in instructional work.

ACADEMIC WORK.

XVI. History.—All advanced work in history is conducted by the laboratory method. This plan has been successfully employed in the junior, the senior, and the graduate classes. A large and well-lighted room has been set apart for this work in the new library building, where all the resources of the rapidly growing library are easily accessible. This room is equipped with maps, diagrams, charts and suitable tables and chairs. The library is a depository for all government publications. These and other books on American history, with which it is well supplied, offer abundant material for research work in the history of our country. The publications collected by the experiment station constitute valuable material for study in industrial history.

XVII. Physics.—The physical laboratory occupies two rooms one of these being permanently darkened for experimental work in light. It is equipped with numerous standard instruments of precision, such as verniers, micrometers, cathetometers, an horizontal comparator, a Kater's revision pendulum, balances, etc., and a quantity of minor apparatus. Recently there have been added a concave grating spectrograph, a large induction coil of 12-inch spark, and other apparatus of value.

XVIII. Military Tactics.—Instruction in this department is given in conformity with the Act of Congress. Students receive the benefit of regular military drill, and in addition, the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties. The department is supplied with cadet rifles and accoutrements for the corps.

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

XIX.—Physiology and Veterinary Science.—The veterinary department occupies a separate two-story building with nine rooms. It is provided with lecture room, office, working and operating rooms for clinical practice, thoroughly equipped laboratories for work in bacteriology, milk and meat inspection, and with museum containing skeletons of the domestic animals for instruction. Free clinics are given every Saturday for the benefit of the students in veterinary science.

There is a separate dissecting room with cement floor and north roof light, constructed especially for this department. This laboratory is used by the professor and students each afternoon for three months.

BUILDINGS.

The frontispiece is a representation of the Main Building.

This building is 160 x 71 feet and contains forty-five rooms. It contains lecture rooms, administration offices, physical laboratory, museum, armory, etc.

LANGDON HALL.

This is a two-story building 90 x 50 feet. The second story is the audience hall, used for commencement and other public occasions.

POWER HOUSE AND SHOPS.

The first story of Langdon Hall is appropriated to the laboratory of first year wood work in mechanic arts.

The machine shop, forge shop, foundry, and boilers are installed each in separate buildings. A handsome building, two stories in height, pressed brick and stone trimmings has been constructed for occupation by the power plant on the first floor and by the pattern making department on the second floor. The dynamo laboratory occupies a separate building.

A commodious boiler house has been built. It is of fire-proof construction and is supplied with track and cars for handling coal from the bin to the boiler. Scales are provided for keeping accurate account of the coal consumed.

BROUN ENGINEERING HALL.

The alterations and additions to the William LeRoy Broun Engineering Hall were completed and the building occupied in September, 1910. The finished structure is 250 feet long, 50 to 90 feet deep, and three and four stories in height, enclosing a floor area of 43,500 square feet. In construction this building is practically fire proof and in exterior design conforms in general to the other buildings on the campus. The walls are laid up in selected red brick, with limestone and terra cotta trimmings.

Offices, lecture rooms, and laboratories for the departments of mechanical, electrical, mining and civil engineering, machine design and drawing, are located within this building, and all the interior accommodations are especially arranged to facilitate the special work of each department.

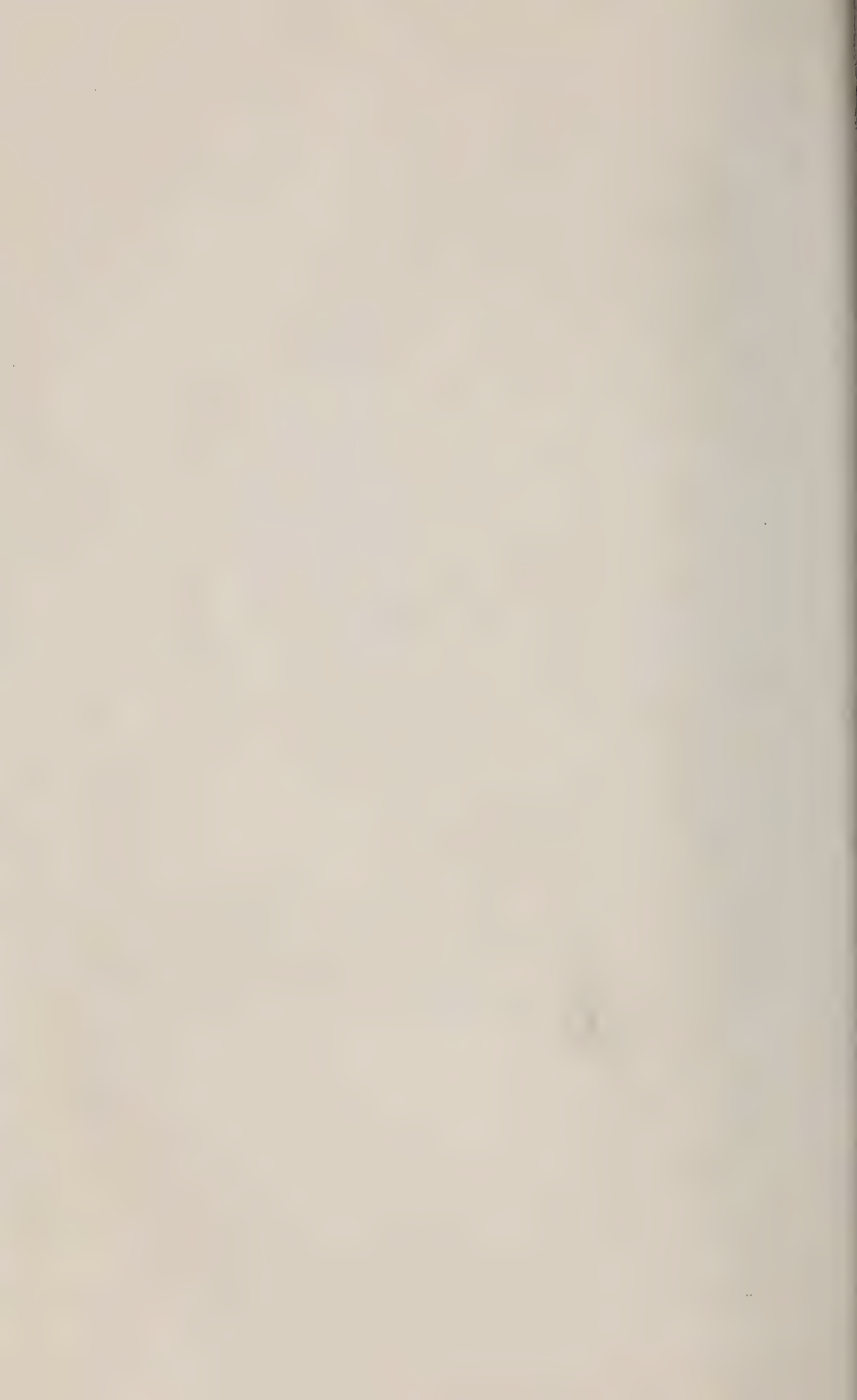
This building, an illustration of which appears on a preceding page, was designed and superintended by the department of architecture.

CHEMICAL LABORATORY.

As shown on the opposite page, this is a two-story structure, 40 x 60 feet, with a rear projection, 35 x 60 feet, of one-story and basement, and contains eight rooms. The exterior is of pressed brick, with cut stone trimmings and extra terra cotta ornamentation.



Chemical Laboratory



ANNEX TO CHEMICAL LABORATORY.

This is a three-story brick building containing rooms and laboratories for the department of pharmacy.

The chemical laboratory for the agricultural experiment station occupies a building 60 x 26 feet, and is appropriated exclusively for chemical investigation and research.

SMITH HALL.

The Otis D. Smith Dining Hall, constructed of stone and pressed brick is two stories in height, and one hundred and forty feet in length. It will accommodate three hundred in the dining hall, and forty in the dormitory above. The style is semi-colonial.

CARNEGIE LIBRARY.

The library building is a handsome structure of classical outline monumental in its general effect. It is presented in an accompanying cut.

AGRICULTURAL BUILDING.

A handsome and commodious building is occupied by the departments of (1) agronomy, (2) horticulture, (3) botany, (4) entomology, and (5) animal husbandry, together with a separate set of buildings for practical work in each of these departments. It is the general opinion that there is no superior, if equal, group of buildings for agricultural purposes in the South. The building is three stories in height and is constructed of pressed brick with stone trimmings.

ALUMNI GYMNASIUM.

The central unit of the Gymnasium presented to the College by the Alumni was dedicated February 22nd, 1916. It is an attractive three-story structure 110 x 60 feet built of brick and stone. The first floor contains the dressing rooms and showers for the athletic teams, the students' lockers and showers being located on the second floor. The main Gymnasium hall is on the third floor.

It is planned to complete the building at an early date.

GRADUATES

CLASS OF 1915.

HONORS.

Members of the Senior Class who attain distinction with a grade of 95 per cent, are graduates with Highest Honor. Those who attain a distinction with a grade of 90 per cent, and less than 95, are Graduates with Honor. Those who attain less than 90 per cent, and more than 60 per cent, are Graduates.

DEGREES.

BACHELOR OF SCIENCE.

GRADUATES.

Charles Jefferson Allen	Lee
Edward Amende Allen	Jefferson
Lawrence Cary Amos	Conecuh
Samuel Faucett Anders	Tuscaloosa
Austin Elser Arthur	Marion
Carolus Magnus Blumenfeldt	Mobile
John Robert Boyle	Jefferson
Andrew Jackson Brooks	Lowndes
John Willis Campbell	Marshall
Arvey Carnes	Marion
Charles Walter Castleman	Talladega
Frank Gregory Charlton	St. Clair
Frederick Emmet Cooper	Calhoun
Clyde Augustus Donehoo	Blount
Frances Alexander Duncan	Lee
James Archibald Duncan	Georgia
Arturo E. Elizondo	Mexico
Charles Maynard Farrow	Tallapoosa
Julius Albert Fincken	South Carolina
Jesus Bartolo Galan	Mexico
David Adolphus Gammage	Barbour
Condie Pugh Gaston	Wilcox
Daniel DeKalb Gibson	Clay
Charles Hereford Gilmour	Jefferson
Wilmer Eugene Hall	Morgan
Franklin Augustus Hart	Montgomery
Crawford Buchanan Hawkins	Mississippi
James Thomas High	Marshall
Kirk Theron Holley	Marion
Walter Lucian Howard	Marshall
Robert Maull Howe	Lee
Clarke Upham Irvine	Mobile
Robert Brice Johnston	South Carolina
Lee Eugene Kimball	Lee
Fabius Henry Kohloss	North Carolina
Robert William Lawton	Florida
Edmund Clark Leach	Tallapoosa
Daniel Hugh McEachern	South Carolina
Clyde Fuller McLendon	Montgomery
Homer Hosea Ballou Mask	Lee

Joel Philip Melvin	Tennessee
Leslie Albert Miller	Walker
Jay Millican	Marion
Carl Dent Montgomery	West Virginia
Charles Fletcher Moreland	Texas
Lorenzo Daniel Morgan	Dallas
James McCoy Oliver	Tallapoosa
Lex Sneed Owens	Pike
Robert Jemison Owens	Hale
William Ware Palmer	Lee
George Allen Patterson	Mobile
Leonard Graham Pearce	Autauga
Milliard Hosmer Pearson	Randolph
Jack Noble Peebles	Montgomery
Hamilton Manoah Robertson	Tennessee
Billy Glenn Rushing	Escambia
Hardy Booker Sandlin	Marion
Albert Vertner Sevier	Louisiana
Thomas Chilton Smith	Jefferson
Philip Nicholas Sowell	Escambia
Ransom Davis Spann	Montgomery
Victoria Steele	Lee
Thomas James Stephenson	Dallas
Harry Humphrey Stirling	Jefferson
Louis Edwin Stotlar	Illinois
Leonidas Polk Sweatt	Jefferson
Hassie Earl Terrell	Lee
William Stewart Ticknor	Lee
Furman Leffell Tucker	South Carolina
Arthur Pearce Turner	Colbert
Homer Heard Turner	Colbert
Ira Davis Vail	Greene
Albert Weaver	Escambia
Felix Branyon White	Marion
William Lemuel White	Marion
Frank Whitaker Wilmore	Lee
Eugene Hewitt Wilson	Blount
Gautier Conde Yancey	Macon

GRADUATES WITH HONOR.

William Emmet Ayres	Lamar
Jackson Frederick Bazemore	Coosa
Albert Bonds	Greene
Louis Roderick Botsai	Jefferson
Oscar Carson Bottoms	Marion
Ernest Carnes	Marion
Alfred Lee Harrell, Jr.	Chambers
Cosette Woodley Harrison	Montgomery
Wilbur Fisk Littleton	Florida
Ellison Smyth McKissick	South Carolina
Pierce R. V. Pettis	Clarke
Cleveland Gillespie Sharp	Morgan
John Asa Simms	Sumter
Joseph Paullyn Wilson	Pike

GRADUATE WITH HIGHEST HONOR.

John Boyd Overstreet	Kentucky
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GRADUATES IN PHARMACY (PH. G.)

Cecil Charles Bean	Cleburne
Jesse Jared Coleman	Escambia
Simpson Wright Day	Morgan
James Shields Gaskell	Autauga
Homer Samuel Gentry	Bibb
Hoyt Greer	Cleburne
Charles Archibald Harris	Clarke
Simon Mathew Jones	Barbour
Edwin Lee McMillan	Wilcox
Thomas Richard Nash	Shelby
Ethridge Bryant Thompson	Clay
Ira Junius Wiggins	Monroe

GRADUATE WITH HONOR.

Vann Lindley Spruiell	Jefferson
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PHARMACEUTICAL CHEMIST (PH. C.)

Loathur Guy Webb	Calhoun
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GRADUATES IN VETERINARY MEDICINE (D. V. M.)

Godfrey Charles Bevan	Jefferson
Leon J. Bonner	Clay
Sanford Gollie Carter	Randolph
Issachar Grady Gauntt	Tallapoosa
Travis Branch Gissendanner	Dale
Thomas Blake Howle	Calhoun
Robert Morgan Lambert	Monroe
Herbert Bryan Nixon	Calhoun
Guy Maxey Parrish	Lee
Irby Rheuel Pollard	Crenshaw
Wade Hampton Reinhardt	North Carolina
William Simp Seibold	Marshall
Roy Felton South	Blount
Frederick Steele	Lee
Redding Stancell Sugg	North Carolina
Charles Thigpen	Lowndes
Marvin William Williams	Lee
Vincent Brown Wright	South Carolina

POST GRADUATE DEGREES.

MASTER OF SCIENCE.

Cleburne Ammen Basore	Jefferson
Frank Ewell Boyd	Chambers
Otto Brown	Choctaw
James Reid Campbell, Jr.	Macon
Charles Washington Culpepper	Randolph
Joe John Haralson	Lee
Marvin Pipkin	Florida
Frederick William Wendt	Montgomery
Joseph Madison White	Montgomery

PROFESSIONAL DEGREES IN COURSE.

MECHANICAL ENGINEER.

Robert Fernand Angelo Benson	Mobile
Arthur Zellars Heard	Lee
Ralph Waldo Riddle	Jefferson

ELECTRICAL ENGINEER.

Arthur Trezevant Feaster, Jr.	Jefferson
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John Rush Lester	Georgia
Eugene Mason Lindsey	Georgia
John Llewellyn Prosser	Mississippi
Otto Karthaus Seyforth	Madison

DEGREES FOR PROFESSIONAL WORK.

ELECTRICAL ENGINEER.

Holland Eugene Cox	Jefferson
William Walton Garrett, Jr.	Jefferson
James Weston Moore	Louisiana

CIVIL ENGINEER.

Thomas Henry Edwards	Montgomery
Samuel Thomas Jones, Jr.	Tuscaloosa
Thomas Cole Mitchell	North Carolina

HONORARY DEGREE.

DOCTOR OF SCIENCE.

Altus Lacy Quaintance	Washington, D. C.
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DISTINGUISHED STUDENTS

SESSION 1914-1915.

Students who receive a grade of above 90 per cent. and less than 95 in three studies in the Freshman Class, in four in the Sophomore Class, five in the Junior, and in six in the Senior, are distinguished for excellence in scholarship, and are awarded Certificates of Distinction. Those who receive a grade above 95 per cent, are awarded Certificates of Highest Distinction.

FRESHMAN CLASS.

DISTINCTION.

William Wallace Allen	Florida
Jerome Cochran Ard	Dale
Walter Steele Black	Limestone
William Arnold Guess	Mississippi
Joseph Henry Hamilton, Jr.	Jefferson
DeWitt Hicks	Tallapoosa
Charles L. Isbell	DeKalb
Robert Lapsley	Jefferson
Phares Wood Matthews	Jefferson
James Belser Mayes, Jr.	Georgia
John Albert Peterson	Coosa
Emory Echols Ruffin	Shelby
John Allen Strozier	Georgia
William Woodward Sullivan, Jr.	South Carolina
Lovell Lack Turley	Missouri
James Henry Witherington	Conecuh
William Herman Withington	Jefferson

HIGHEST DISTINCTION.

James Thomas Fowler	Elmore
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SOPHOMORE CLASS.

DISTINCTION.

William Lee Blanton	Florida
Roy Gatman Carpenter	Marion
Alvan Christy Davis	Geneva
Ernest Linwood Deal	Tuscaloosa
Daniel Andrew Helmich	Jefferson
Edward Beverly Henry	Lee
James Roy Hines	Chambers
Ray Milton House	Calhoun
William Robert Lassiter	Russell
Hester Marion Lewis	Bibb
Albert Cotton McMillan	Russell
James Frederick Pruett	Russell
John Parker Shaffer	Tallapoosa
Frank King Simmons	Florida
Francis Bryan Wakefield, Jr.	Florida
John Meriwether Ward	Greene
George Egbert Weber, Jr.	Lee

Gilmore Clark Williams	Cullman
Charles Eddie Wilson	Marshall

HIGHEST DISTINCTION.

Alan Benjamin Pimm	Florida
Wilbur Thomas Shinholser	Georgia
Lamar Mims Ware	Georgia
Shu Min Wong	China

SPECIAL STUDENTS.

DISTINCTION.

Thaddeus Lamar Glenn	South Carolina
Wirtter Shipp Hackworth	Jackson
Osie Columbus LaGrone	Dallas
Jep Edward Moody	Jackson
John Herbert Murray	Escambia
C. F. Nonnemacher	Calhoun

JUNIOR CLASS.

DISTINCTION.

James Warren Andrews	Montgomery
Joseph Davenport Browne, Jr.	Tennessee
George Roy Corcoran	Russell
Posey Oliver Davis	Limestone
Perry Jackson Edwards	Morgan
Herbert Lee Evans	Hale
Harry Gordon Farris	Etowah
Arnold Edmund Hayes	Jefferson
Andrew Orestes Jackson	Pike
Cyrus Edson Newman	Coosa
William Charles Payne, Jr.	Tennessee
Ernest Slager	Tennessee
Edward Ward Smith	Lee
Percy Reynolds Smith	Jefferson
Louis Truitt Wells	Pickens
Jesse Jay Williams	Clarke
Samuel Andrew Wingard	Montgomery
Michael Vernon Zimmerman	Jefferson

HIGHEST DISTINCTION.

Lee Irwin Davis	Mobile
Henry Lord Page King	Georgia
George Lampros	Montgomery

CATALOGUE OF STUDENTS

SESSION 1915-1916.

GRADUATE STUDENTS.

Ernest Clifton Adkins	Jefferson
Charles Jefferson Allen	Lee
Miles Augustus Askew	Marengo
William Emmet Ayres	Lamar
Jackson Frederick Bazemore	Coosa
Clyde Augustus Donehoo	Blount
Frances Alexander Duncan	Lee
Arturo Enrique Elizondo	Mexico
Julius Albert Fincken	South Carolina
David Adolphus Gammage	Barbour
Daniel DeKalb Gibson	Clay
Charles Hereford Gilmour	Jefferson
Cosette Woodley Harrison	Montgomery
James Baxter Jackson	Lee
Robert Brice Johnston	South Carolina
George Alston Kellum	Shelby
Lee Eugene Kimball	Lee
Edmund Clark Leach	Tallapoosa
Herbert Marshall Martin	Florida
Joel Philip Melvin	Tennessee
Carl Dent Montgomery	West Virginia
Emery Tyler Motley	Randolph
Millard Fillmore Nixon	Jefferson
John William Pace, Jr.	Lee
Pierce R. V. Pettis	Clarke
Ransom Davis Spann	Montgomery
Frances Victoria Steele	Lee
Hassie Earl Terrell	Lee
Albert Weaver	Escambia
Wilton Wendell Webb	Lee
Felix Branyon White	Marion
Frank Whitaker Wilmore	Lee

SENIOR CLASS.

John Gill Anderson, Jr.	Tennessee
James Warren Andrews	Montgomery
Hayne Coker Appleton	DeKalb
John Dunklin Ashcraft	Lauderdale
Richmond Young Bailey	Chambers
John Tonice Belue	Lauderdale
George Woodbury Farra Ribb	Texas
Wyly McGehee Billing	Montgomery
Roger Melver Bostick	Mississippi
James Rosby Brown	Florida
Joseph Davenport Browne, Jr.	Tennessee
Walter Frederick Bulla	Georgia
Joseph Elliott Bumby	Jefferson
James William Burgin	Jefferson
William Alexander Burns, Jr.	Talladega
Green Berry Bush, Jr.	Choctaw
Robert Emmett Cammack	Clarke
Robert Ezekiel Campbell	Sumter
Wilmer Huxley Carter	Florida

Kenneth Gladstone Caughman	South Carolina
Thomas Holmes Chapman	Dallas
Thomas William Clift	Madison
George Roy Corcoran	Russell
William Davis Crawford	Macon
Samuel Neil Crosby	Baldwin
Joseph Alpha Cullars	Lee
Richard Henry Cunningham	Choctaw
William Velpeau Curtis	Lee
Berrien Walker Davis	Georgia
Lee Irwin Davis	Mobile
Posey Oliver Davis	Limestone
Robert Dennis	Pike
William Reese Dillard	Georgia
Leo Donovan	Dallas
Vernon James Douglass	Jefferson
David Merrick Dowdell	Lee
Ambrose Camp Duggar	Lee
Perry Jackson Edwards	Morgan
Paul Edward Engle	Jefferson
Herbert Lee Evans	Hale
Harry Gordon Farris	Etowah
John Charles Ferris	Georgia
Seth Jordan Floyd	Lee
John Wilbur Freeman, Jr.	Georgia
Roland Macon Fricke	Marshall
Edward Samuel Gatchell	Lee
Werter Shipp Hackworth	Jackson
Arnold Edmund Hayes	Jefferson
Frederick Hollis Haynie	Lee
Montgomery Lamar Howe	Lee
Andrew Orestes Jackson	Pike
John Moses Keith	Lee
William Lewis Kellum	Shelby
Henry Lord Page King	Georgia
George Lampros	Montgomery
Glen David Liddell	Wilcox
William Charles Louisell	Mobile
Edmund Mitchell Manning	Chilton
Robert Forney Middleton	Etowah
George Augustus Miller, Jr.	Florida
William Thomas Mills	Jefferson
James Caldwell Mohns	Jefferson
John Daniel Moore	Bullock
Sarah Evelyn Moore	Lee
Claud Mortimer McCall	Escambia
Paul Sioussat McCormick	Mobile
Laurrie Artemus McCranie	Florida
Alva Pinkston McCrary	Georgia
Clifford Braswell McManus	Georgia
Lawrence Marvin McRae	Chambers
Emile Nelson	Mobile
Cyrus Edson Newman	Coosa
Lucius Rives Owsley	Elmore
Woodie James Pace	Calhoun
William Charles Payne, Jr.	Tennessee
Joseph Bancroft Perry	Jefferson

Wilton Burton Persons	Montgomery
James Goggins Peterson	Coosa
George Arthur Pfaffmann	Lee
Frank Poole	Butler
Osie Clyde Prather	Lee
Dibble Manly Rickenbaker	South Carolina
Thomas Christopher Rives	Montgomery
James Thomas Roberts	Marshall
Walter Hugh Roberts	Baldwin
Otto Meinhardt Schomburg	Georgia
Frederick Gordon Sholes	Jefferson
Ernest Slager	Tennessee
Edward Ward Smith	Lee
Gordon Roysee Smith	Geneva
Jasper Newton Smith, Jr.	Georgia
James Terry Smith	Montgomery
Percy Reynolds Smith	Jefferson
William Jackson Smith	Montgomery
George Henry Stewart	Coosa
Carl Laten Stuckey	Etowah
Francis Marion Taylor	Lee
John Ewing Taylor	Butler
Edward LeRoy Tuttle	Houston
Edwin Adolphus Wagner	Texas
Russell Fleming Walthour, Jr.	Lee
George Lawrence Washington	Cuba
Louis Truitt Wells	Pickens
Jesse Jay Williams	Clarke
James Davis Williford	Lee
Samuel Andrew Wingard	Montgomery
William Wadsworth Wood	Jefferson
John Garland Woodall	Jackson
David A. Woodard	Louisiana
Oliver Eubert Young	Choctaw

JUNIOR CLASS.

William Chester Alexander	Russell
Irvin Gravely Ammen	Jefferson
Thomson William Bailey	Jefferson
Hammond Dudley Baker	Lowndes
William Watson Barron	South Carolina
Harrison Bates	South Carolina
Carl Lee Beall	Crenshaw
Julian Dumas Beard	Choctaw
Walter Gustavas Beville	Hale
Thomas Wood Blanchard	Jefferson
William Lee Blanton	Florida
George Randolph Bowling	Tallapoosa
William McClellan Bruce	Wilcox
Cyril Kenneth Bryan	Jefferson
Frate Bull	Marion
Hugh Otis Burgess	Cleburne
Francis William Burns	Clay
Abner Boone Chapman	Covington
James Arthur Chappell	Jefferson
William Worth Corcoran	Russell
Mary Glenn Crenshaw	Lee
Ernest Linwood Deal	Tuscaloosa

Lewis Battle Dean	Tallapoosa
John Andrew Douglas	Mobile
Albert Hugh Dumas	Lee
Julius Eagle	Dallas
Annalee Edwards	Lee
Harrison Bartow Emerson	Etowah
Louis William Fogarty	Florida
Gordon Green Ford	Franklin
Joseph Marshall Foulks	Louisiana
Loraine Walker Funk	South Carolina
Joseph Best Grimsley	Georgia
Henry Haigler	Jefferson
Edward Beverly Henry	Lee
James Roy Hines	Chambers
Lovick Pierce Hodnette	Macon
Elza Bland Holloway (Irregular course)	Autauga
Charles L. Isbell	DeKalb
Leon Ledyard Jeffrey	Wilcox
John William Johnston	Blount
Allard Kaufmann	Louisiana
James Marion Kelly, Jr.	Georgia
Edgar Kimball	Lee
Captain Tullis Knight	Barbour
William Robert Lassiter	Lee
Hester Marion Lewis	Bibb
Joseph Thomas MacLean	Florida
William Wyman Owens	Pike
Alan Benjamin Pimm	Florida
Wallace Screws Pitts	Montgomery
John Carew Powell	Montgomery
Homer Prendergast	Texas
William Thomson Price	Tuscaloosa
Bryan Pritchett	Clarke
James Frederick Pruett	Russell
Joseph Posey Robertson	Fayette
Carey Cox Robinson	Tallapoosa
Robert Pearson Salter	Greene
Bradley Johnson Saunders, Jr. (Irregular course)	Jefferson
John Hadley Scott	Tennessee
Edward Noble Scoville, Jr.	South Carolina
Harry Berry Seybt	South Carolina
John Parker Shaffer	Tallapoosa
Sylvester Guinn Sharit	Jefferson
Wilbur Thomas Shinholser	Georgia
Frank King Simmons	Florida
Augustus Hoke Sloan	South Carolina
Harry Peckham Sparkes	Jefferson
William Augustus Stickney	Calhoun
Eunice Rebecca Stodghill	Lee
Philip Avary Terrell	Lee
Richard Hartwell Thach	Lee
John Earle Thomason	Lamar
Robert Lyle Thompson	Jefferson
Henry Philip Trawick	Lee
Conrad Grey Wall	Jefferson
John Meriwether Ward	Greene
Lamar Mims Ware	Georgia

Harold Smith Watkins	South Carolina
James Withrow Webb	Tuscaloosa
George Egbert Weber, Jr.	Lee
Newell Browne Wentworth	Mexico
Wheeler Williams, Jr.	Russell
Shu Min Wong	China
Barbara Wright	Lee

SOPHOMORE CLASS.

John Cooper Adams	Morgan
William Wallace Allen	Florida
Jerome Cochran Ard	Dale
Cyrus Andrew Ashcraft	Lauderdale
Richard Braxton Ashe	Colbert
William King Askew	Marengo
Earl Cranston Atkins	Cleburne
Walter Steele Black	Limestone
Madison LeRoy Bonner	Clay
Thomas Herbert Bonner	Clay
Robert Emmett Britnell	Franklin
Jesse Samuel Burbage	Jefferson
Guy Olney Burns	Lauderdale
Charles Cleveland Bush	Talladega
Colonel Richard Carnes	Marion
Roy Gatman Carpenter	Marion
Ralph Akin Carroll	Lee
Harry Montagnier Chaddock	Madison
Horace Lindsay Cooke	Jefferson
John Stephen Neal Davis, Jr.	Georgia
Ralph Emerson Davis	Georgia
Charles Leonard Dill	Madison
Richard Joseph Ducote	Mobile
Elmer Odell Duffey	Jefferson
Yndalicio Andres Elizondo	Mexico
McKendree Heard Floyd	Lee
James Thomas Fowler, Jr.	Houston
James Tarver French	Pike
Benjamin Bradley Fuqua	Lauderdale
James Leonard Garthright	Autauga
Horace Vernard Grimes	Texas
William Arnold Guess	Mississippi
James Richmond Hall, Jr.	Tallapoosa
Joseph Henry Hamilton	Jefferson
George Boltz Hawthorne	Wilcox
B. H. Haynes	Clay
William Caesar Hearn	Macon
Harold Herzberg	Georgia
Lewis Harris Heyman	Tennessee
DeWitt Hicks	Tallapoosa
Samuel White Hill	North Carolina
Sidney Bowie Hooper	Marshall
Henry Harris House	Etowah
John Thomas Hudson, Jr.	Tennessee
William Jesse Isbell	DeKalb
David Charles Jimmerson	Lee
Elizabeth McTyre Johnson	Lee
Thomas Jordan	Marshall
Dewey Killgore	Randolph

Albert Johnson Kirby	Jackson
Augustus Theodore Levie	Coosa
William Lithgow Liddell	Wilcox
Andrew Dowdell Lipscomb	Lee
James Hunter Martin	Limestone
Oscar Lafayette Martin, Jr.	South Carolina
Phares Wood Matthews	Jefferson
James Belser Mayes, Jr.	Georgia
George Rufus Mays	Marion
Robert Lee Miller	Walker
Richard Rose McAdory	Jefferson
Walter Littleton McArthur	Geneva
Leslie Bateson McCoy	Escambia
William Cook McKay	Montgomery
Thomas Turner McLemore	Jefferson
Oscar Lee McMurray	Franklin
Olin Coke Newell	Tallapoosa
Philip Lesley Nichols	Wisconsin
Ellison Avery Phillips	Clay
Herman Shelby Price	Madison
Herbert Balshaw Rigby	Georgia
Hickman Riley	Coffee
Milton Boyd Roberts	Mobile
William Johnston Ross	Calhoun
Emory Echols Ruffin	Shelby
John James Ryan, Jr.	Tennessee
Dudley Dunn Saunders, Jr.	Tennessee
William B. Saunders	Mississippi
Abb Llewellyn Scarbrough	Calhoun
Otto Henry Schultz, Jr.	Jefferson
John Andrew Shealy	Louisiana
Albert Edward Sheridan	Georgia
James Edgar Shotts	Marion
William Clem Sills	Wilcox
Robert Paul Simmons	Dale
John Marion Sparrow	Lee
Jason Weldon Spencer	Florida
William Matthew Stewart	Jefferson
Barckley Augustus Storey	Talladega
Aubie Casey Strickland	Lee
John Alan Strozier	Georgia
William Woodward Sullivan, Jr.	South Carolina
James Andrew Thigpen	Lee
Hubert Wright Thomason	Lee
Leo Tsiang	China
Lovell Lack Turley	Missouri
David Broome VanPelt	Talladega
Jesse Jordan Warren	Montgomery
John Harrison Watson	Lee
Laura Watt	Lee
Edward Clarke Whitfield	Kentucky
Earl DeWitt Williams	Houston
Allen Davidson Williamson	North Carolina
James Henry Witherington	Conecuh
William Herman Withington	Jefferson
Neel Samuel Yent	Florida

FRESHMAN CLASS.

Charles Harris Adams	Dale
Roland Lee Adams	Clarke
George Percer Allen	Tallapoosa
Simeon Arthur Allen	Shelby
Roger William Allen	Jefferson
Adrian Fuller Alsobrook	Chambers
James Walter Anderson	Hale
James Oliver Avery	Marion
Marion Russell Avery	Marion
William Henry Avery	Marion
David Lewis Baker	Florida
Costa Boone Barker	Cleburne
Vida Barker	Cleburne
Malory Lafoy Batson	Jefferson
Roy Samuel Beall	Crenshaw
Robert Marion Beasley	Lee
Charles Herschel Bedingfield	Lauderdale
Kline McCageor Bentley	Crenshaw
Wyatt Heflin Blake, Jr.	Colbert
Helen Louise Blasingame	Lee
Anthony Joseph Bowab	Mobile
Harold Alfred Bowron	Jefferson
Richard Courtlandt Bradford	Cherokee
Cecil Brannen	Crenshaw
Thomas Milton Brannon, Jr.	Barbour
Lyle Brown	Choctaw
Marvin Earle Bryant	Baldwin
George Larkin Burleson	Marion
Europe Alexander Caldwell	Jackson
Norman Glenn Camp	Georgia
William A. Campbell	Macon
Homer Carder	Jefferson
Harris Preston Carter	Monroe
Thomas Browning Chambers	Limestone
Linney Leonidas Childree	Dale
Charles Jefferson Christian	Shelby
John Beverly Christian, Jr.	Florida
Albert Louis Clark	Tallapoosa
John Brewer Coarsey, Jr.	Florida
Eugene Collier	Morgan
Charles Jordan Colquett	Crenshaw
Albert Alley Cook, Jr. (Irregular course)	Tennessee
William Cook	Walker
Jesse Glenn Corbett (Irregular course)	Dale
Armstrong Cory	Jefferson
William Henry Cotton	Georgia
Eugene Benson Crawford	Macon
Marion Graves Crosthwait	Jefferson
Frederick Harder Cutts	Georgia
Elwood Winton Deming	Conecuh
Robert Floyd Donehoo	Blount
Charles Edwin Doughtie, Jr.	Georgia
James Hodges Drake	Lee
Llewellyn Goode Duggar	Lee
George Webster Duncan, Jr.	Lee
James Armstrong Duncan (Irregular course)	Morgan

George Graham Dunn	Autauga
L. B. Dunnigan	Florida
Hugh Durrance	Florida
Albert Thomas East	Clay
Everette Champ Easter	Limestone
William Correll Edwards	Chilton
James Laurence Elliott	Shelby
Robert Ford Ellis	Escambia
Phillip David Fancher	Shelby
Alston Barnes Farrell	North Carolina
Lemuel Carlclard Faulkner	Lamar
Dewey Mattison Ferrell	Greene
Franklyn Forbes	Florida
James Douglas Foster	Lee
Francis Otis Fox	Mississippi
Ernest Vassie Frederick	Marion
Philip Frederick	Georgia
James Michael Fullan	Lee
John Peyton Fuller, III.	Madison
Clarence Galloway	Pike
John Necklin Gardner	Georgia
William Henry Gardner	Pickens
Walter Lamont Garrard	Mississippi
Edmond Peter Garrett	Limestone
Euel Howard Gentry	Bibb
Thomas Bryan Gilbert	Louisiana
James Needham Gilmer	Choctaw
William Francis Godwin	Georgia
John Carey Goodwin	Marshall
Samuel Earle Greene	Jefferson
Ivy Moore Griffin	Clarke
Paul Stanley Grimes	Georgia
Glynn Hightower Grisham	Limestone
James Madison Hall, Jr.	Bullock
Louis Miller Hall, Jr.	Tennessee
William Robert Hall	Jefferson
Wayne Willard Hall	DeKalb
Donald Brinton Hammond	Houston
Verner Cyril Hanna	Mississippi
Everette Lee Harper	Pickens
Carven Bratie Harvey	Blount
Walter Ferrell Hasson	Tuscaloosa
John Carroll Hay	Madison
James Edwin Hillhouse	Jefferson
DeWitt Herndon Holder, Jr.	Mississippi
Mayfield Judson Hollingsworth	Pickens
Albert Lee Holloway	Monroe
William Louis Holmes	Houston
Frank Marchant Houston	South Carolina
John Edward Howell	Dale
Charles Moorman Hurt, Jr.	Tennessee
John Ralph Jackson	Jefferson
E. C. Johnson	Georgia
Arthur Lafayette Jones	Calhoun
Charles Alfred Jones, Jr.	Jefferson
Grady Whittle Jones	Escambia
Archibald Monroe Kearley	Monroe

Landon Gaines Kelly	Tennessee
Henry Thomas Killingsworth, Jr.	Georgia
Howard Malorie Kilpatrick	Pickens
William Duke Kimbrough	Wilcox
Sergay Philip Knazeff	Russia
Ponsonby Kyle	Morgan
Robert Gideon Langdon	Pickens
Arthur Armon Lauderdale	Marion
George Scarbrough Leatherbury, Jr.	Mobile
Herman Lee	Bibb
Milton Paul LeGrand	Montgomery
L. D. Lessley	Clay
William Mem Little	Georgia
James Otis Lisenby	Houston
George Ernest Lumpkin	Marshall
Dashiell Livingston Madeira	Florida
Clarence Lenwood Manning	Covington
Hubert Reynolds Martin	Dale
Merlin Angelo Martin	Mobile
Frederick Jolly Matthews	Georgia
George Augustus Mattison	Clay
George Knox Miller, Jr.	Florida
Willard Mitford Mobley	Jefferson
Jep Edward Moody	Jackson
John Bartow Murphy	Talladega
Minnie Murphy	Macon
George Terry Murrah (Irregular course)	Jefferson
Bruce William Murray	Mobile
Christopher Murray	Tennessee
Durward Quigley McCord	Marshall
Herbert Worth McCown (Irregular course)	Madison
Cecil Barron McCrary	Clay
Warren William McGowan	Louisiana
Albert Plant McIntosh	Florida
James Henry McIntosh, Jr.	Franklin
Joseph Harlan McKinstry	Pickens
Henry Thomas McKown	Baldwin
James Hamilton Hall McKoy	Georgia
Forrest Whitlock McMeans	Jefferson
Banks McRaven, Jr.	Mississippi
Solomon Joseph Nadler	Etowah
Laurence Alton Nall	Louisiana
Julius Rembert Nesbitt	Jefferson
Edwin Oliveira	Wilcox
George Eldridge Owens	Pike
John Harlan Owens	Clay
John Kelly Page	Geneva
James Edmund Parker	Calhoun
Philip William Pelts	Mississippi
Marvin Lucian Perdue	Coffee
Capers Jones Perryman	Jefferson
Charles Scudder Peter	Shelby
Sidney Clarke Phillips	Mobile
Wilbur Arnold Pipkin	Florida
Joseph Leeve Pitts	Bullock
Elisha Frederick Pollard	Crenshaw
Jefferson William Pruett	Coosa

Joel Marbury Rainer	Bullock
Robert Freitas Redding	Georgia
Russell Sage Reed	Etowah
John Hugh Reynolds	Lee
Robertson Riggs	Tennessee
Leo Napoleon Rivaïs	Georgia
Everett Roberts	Tennessee
Clifford Rutland	Georgia
Cole Savage	Pickens
John Hamilton Schuler	Etowah
Charles Clinton Seed	Hale
Leon William Segrest	Geneva
Leroy Lafayette Self	Blount
John McElroy Selman	Coosa
Emmette Cecil Sharpe	Calhoun
Arthur Shaver	Cullman
Charles Martin Shaw	Macon
Frank Herndon Sims	Sumter
Thomas Andrew Sims	Walker
Glenn Orr Sligh	Jefferson
Angus Atkinson Smith	Geneva
Alma Smith	Lee
Horace Arthur Smith	Mississippi
Leon Smith	Georgia
Frank Clements Smith	Marengo
James Thomas Smith	Georgia
Lansing Taylor Smith, Jr.	Calhoun
Curtis E. Snead, Jr.	Etowah
Henry Clay Snellgrove	Marshall
Norman Dantzler Spann	Houston
Roland Lee Sparkman	Jefferson
Charles Hall Speights, Jr.	South Carolina
Ezra Stonewall Stabler	Butler
Archibald Stallings	Texas
Cohen Elbert Stapp	Pickens
Samuel McKinley Stewart	Coosa
Thomas Vernon Stinson	Cherokee
Andrew McAdams Stovall, Jr.	Walker
John Braden Suggs	Talladega
John Patrick Sullivan	South Carolina
Nim Bellotte Sullivan	South Carolina
Marvin Taylor	Marion
Emmett Edwin Terry	Madison
James Wallace Tidmore	Hale
Franklin Osborn Tilton	Geneva
Lionel Earl Tisdale	Florida
Cyril Theodore Tucker	Mobile
Roy Hope Turner	Tallapoosa
James Fielding Vaughan	Mobile
Ross Franklin Wadkins	Lee
Glover O'Neal Waits	Covington
Felix Augustus Walker	Russell
Harold Walker	Jefferson
George Elmer Waller	Lee
Charles Walton, Jr.	Georgia
James Kittrell Ware (Irregular course)	Etowah

James Clarence Watson	Geneva
William Benjamin West	Cherokee
Chalmers Eugene Whigham	Barbour
Winston Campbell White	Sumter
Pryor Allen Williams	Limestone
Arthur Herbert Williamson	Lowndes
George Alfonso Wright	Lee
George Herbert Wright	Lee

DEPARTMENT OF PHARMACY.

FOUR-YEAR COURSE.

GRADUATE.

Emery Tyler Motley	Randolph
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SENIOR CLASS.

Thomas William Clift	Madison
Montgomery Lamar Howe	Lee
William Lewis Kellum	Shelby
Frank Poole	Butler

TWO-YEAR COURSE.

GRADUATE.

Howard Milton Boyd	Lee
Homer Samuel Gentry	Bibb
Thomas Richard Nash	Shelby

SECOND YEAR.

John Robert Argo	Coosa
Preston Holcomb Cannady	Clarke
Troy Lawless Carter	Perry
Jeffries Nathaniel Dubberly	Lee
Merritt Knight	Wilcox
Osie Columbus LaGrone	Dallas
Albert Young Masters	St. Clair
John Elijah Norman	Lowndes

FIRST YEAR.

Leslie Allen Akins	Barbour
Charles Martin Cherry	Houston
Ernest Matkin Dunn	Marengo
James Thomas Farmer	Geneva
Ellis Gray Griffin	Clarke
Pugh Bryan Harris	Pike
Glover Abraham Johnson	Cherokee
George Lawrence Morris	Crenshaw
Byron Ross McBryde	Geneva
Henry Erskine McNamara	Jefferson
Harden Calvin Reynolds	Lee
Rhett Goode Reynolds	Crenshaw
William Claude Rivenbark	Geneva
McDuff Whitehead	Coosa
Charles George Yarbrough	Monroe

IRREGULAR STUDENTS.

William Patrick Baldwin	Baldwin
Roy Clayton Glasgow	Lamar
Max Matison Moreman	Lee
Carl Vernon Tanner	Mobile
John Keener Thomas	Hale

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

GRADUATES.

Thomas Blake Howle	Calhoun
Frederick Steele	Lee

THIRD YEAR.

Charles Ray Adams	Clarke
Roy Avant	Coosa
William Elmer Bachelor	Elmore
Roe Ballow	Marengo
James Wyatt Boylston	South Carolina
George L. Breeden, Jr.	Dallas
Ernest Will Bryan	Lee
Forrest Eugene Butler	Crenshaw
Elmer Bernard Campbell	Marshall
Irwin Roland Cooper	Marengo
Archie Lee Faulk	Geneva
Legrand Jones Hargett	Lee
George Douglas Ingram	Lee
Alto Lee Johnston	Pike
Benjamin Franklin Jones	Wilcox
Joseph Ernest Kendrick	Dallas
Edwin Doc King, Jr.	Wilcox
Samuel Jones Rayfield	Coosa
Richard Kinion Robertson	St. Clair
Walter Stancel Robertson	Tennessee
Willis Charles Roycroft	Mobile
George Ellis Taylor	Jefferson
Thomas Mitchell White	Fayette
Edgar Eldred Williams	Elmore

SECOND YEAR.

Dee Lloyd Allen	Sumter
William M. Boggan	Sumter
Billy Elza Carlisle	Macon
Hosmer LaFayette Farr	Jefferson
Condie Pugh Gaston	Wilcox
Thaddeus Lamar Glenn	South Carolina
Thaddeus Henry Ingram, Jr.	Lee
Byron Newman Lauderdale	Coosa
Harmon King Law	Pike
Merida Kendrick Monk	Barbour
William Lonnie Parrish	Chilton
Staton Possien	Lee
Walter James Schimmel	Jefferson
George Malcolm Steed	Wilcox

FIRST YEAR.

Daniel Lorenzo Campbell	Etowah
Richard Taylor Compton	Marengo
William Francis Donahue	Lee
David Malphren Enslen	Elmore
William Asher Fuqua	Barbour
John Hart Fussell	Geneva
Guy Rutherford Garroway	Mississippi
Robert Henry Glenn	South Carolina
Roy Howard Herron	South Carolina
Allen Jesse Miller	Clarke

John Bruner Phillips, Jr.	Choctaw
Leon Louis Powell	Choctaw
William Sumter Reynolds	Pike
Harrison Webb Sloane	Mississippi
William Lee Smith	Jefferson
James Ralph Sullivan	Montgomery
Fletcher Leroy Vinson	Lee
Will Smitherman Wilson	Chilton

IRREGULAR STUDENTS.

Thomas Walter Boman	Cleburne
Ruffus Bloomer Brandon	Pickens
Frank Cook	Choctaw
Turner Mitchel Dennis	Chilton
Leonard Johnson Hill	Calhoun
Burrell M. Johnson	Marengo
Judson Jowers	Elmore
Guy Edgar Pace	Georgia
Caggie Pedrick	Georgia
Frank Kirk Peterson	Dallas
Ruffus Arnold Roberts	Randolph
Callis Deal Thompson	Pike
Young Wall	Limestone
Edward Hunter Welles	Tennessee
DeWitt Zaricor	Tennessee

TWO-YEAR COURSE IN MECHANIC ARTS.

Merton Robbins Arnold	Montgomery
Charles Brady Bambarger	Green
Desmond Crain	Wilcox
John Audly Grant	Georgia
Joseph Henry Henderson	Montgomery
Milo Barrett Howard	Montgomery
Raymond Boone Kelly	Jefferson
Franklin Dumas Kimbrough	Wilcox
John Cater Lawton	Florida
Gordon Brady McLemore	Jefferson
James Little Oliver	Sumter
John William Persons	Montgomery
William Earl Shinn	Talladega
Charles Waldo Smith	Jackson

TWO-YEAR COURSE IN APPLIED ELECTRICITY.

SECOND YEAR.

Charles Benton Barnett	Mobile
George Lavender Ferguson	Georgia
Cecil Lamb	Florida
Forest Edgar Nichols	Baldwin
Wilson Roby	Lee
Gayle Borden Williams	Mississippi

FIRST YEAR.

Claude Leland Chester	Georgia
Felix Albartus Coleman	Mobile
John Fleming Deer	Covington
James Graves Duncan, Jr.	Autauga

Charles Wesley Gantt	Elmore
Jesse McNeal Gantt	Covington
Elledge Garrett	Georgia
John Reynolds Gibson	Monroe
Frank Gurley Hall	Madison
William Ingram	Georgia
Ernest Wiley Kennedy	Clay
Thomas Maury Leslie	Etowah
John Allen Lewis, Jr.	Georgia
George Lafayette Morris	Jefferson
Henry Ernest McIntosh	South Carolina
Angus Arthur McIntyre, Jr.	Talladega
Richard Daniel Stevens	Madison
Samuel Jones Tankersley	Georgia
Cecil Werth Thompson	Randolph
Joseph LeNoir Trammell	Florida
Leon Terrill Weaver	Escambia
Onnie Ray Wyatt	St. Clair

TWO-YEAR COURSE IN AGRICULTURE.

SECOND YEAR.

Houston Davidson Alexander	Lee
George Edward Bryant	Baldwin
George LaFayette Cather	Talladega
Walter Pierce Crawford	Marengo
Madison Jones	Hale
Marcus Gatewood Milligan	Cleburne
Edward Penn McGee	Tuscaloosa
James Morriss Peters	Talladega
Hess George Snodgrass	Jackson
Steele Alvis Spencer	Hale
Dewey Elbridge Tanner	Mobile
Jerome Alexander Vandiver	Lee
Robert Newman White	DeKalb
Edward Reuben Wren	Talladega

FIRST YEAR.

Joel Richard Abney	South Carolina
Morton Teadford Ansley	Elmore
Jefferson Davis Blake	Colbert
Wallace Boaz, Jr.	Talladega
James Bruce Bronaugh, Jr.	Madison
John A. Chancellor	Cherokee
William Davis Colley	Pike
Samuel Donovan Croll	Pickens
Luther Hamie Durham	Etowah
Samuel Ryon Edge	Lee
Claud Burgin Edwards	Jefferson
Vivian Pendleton Gaines, Jr.	Mobile
Upshaw Franklin Gibson	Clay
Marshall Grey Harbuck	Russell
Clarence Reuel Hartsock	Mobile
Robert Andrews Hill	Pickens
John Munford Jackson	Marengo
Jacob Emmett Johnson	Lamar
William Skeggs Johnston	Morgan
Frazer Westmoreland Kolb	Montgomery

Denison Sidney Ledyard	Montgomery
Lamont Major	Jefferson
Joseph Walsh Matthews	Mobile
William Edward Moore	Dallas
John Callaghan Moulton	Mobile
Frank Wilson Parker	Kentucky
Frederick Crone Partridge	Mobile
Thomas Laydon Pierce	Barbour
James Stephen Pridgen	Dale
Osborne Britain Rogers, Jr.	Mississippi
Thomas Jefferson Ruffin	Mobile
Malcolm Floyd Smith	Autauga
William Alburto Stiles	Jefferson
Tilghman Anderson Turner	Jefferson
O'Neal Monroe Ware	Georgia
Thomas Mabson West	Montgomery
John Robert Witt, Jr.	Limestone
Joseph Augustus Worthington	Jefferson

IRREGULAR STUDENTS.

Saul Perry Adelson	Jefferson
Joseph Patric Allgood, Jr.	Calhoun
Carl Cofield Amerson	Lee
Edward Yancey Argo	Talladega
Linnie Ayres	Lee
Melville Noel Barnes	Texas
Clarence Reneau Beutell	Georgia
Paul Rubens Bidez	Georgia
Herman West Bingham	Madison
Forest Reynold Birchfield	Jefferson
Charles Jacob Brockway, Jr.	Sumter
Brisbane Hanks Brown	Texas
Ollie Clifton Bryan	Coffee
Gurley Everett Burgin	Jefferson
Hugh William Caffey	Jefferson
John Hosmer Campbell	Clay
Colon Eric Carlovitz	Mississippi
Giles Homer Carlovitz	Mississippi
Elwyn Allen Cary	Lee
Jack Silas Case	Butler
D. Arnold Caylor	Bullock
Joe Wheeler Clancy	Jefferson
Fred Victor Cluis	Georgia
Jackson Lowery Collins	Mississippi
Charles Brandon Crow	Walker
Andrew Howell Crull	Jefferson
Berry Cruse	Jefferson
Herschel Jackson Daniel	Georgia
Edwin Didlake	Jefferson
Bernard Douglass	Crenshaw
Jesse Wallace Drake	Lee
Margaret Louise Duggar	Lee
Ehrman Thrasher Enslen	Elmore
Royl Harden Fletcher	Georgia
Cecil M. Forbes	Jefferson
William Edward Frawley, Jr.	Jefferson
Legare Hairston	Marengo
Adolphus Alexander Hale	Sumter

Estes Hargis	Jefferson
Walter Elbert Harrell	Lowndes
Ellis Phillip Harris	Jefferson
Homer Percy Harris	Jefferson
Daniel Andrew Helmich, Jr.	Jefferson
Nolan Helms	Butler
James Edwin Hickey, Jr.	Montgomery
Joseph Earl Hooker	Walker
Daniel Webster Hollis	Henry
Ray Milton House	Calhoun
William John Howard	Montgomery
Samuel Robert Huey	Jefferson
William Schloss Jacobs	Georgia
Louis Earl Jenkins	Jefferson
Edwin Harley Jessup	Georgia
Lucius Wiley Johnson	Tuscaloosa
Neal Corbly Johnson	Colbert
Robert Thomas Kernahan	Colbert
John Edward Key	Chambers
Howard Cecil Kilpatrick	Jefferson
Henry Hayes Lamar	Lee
Robert Lapsley	Dallas
Marion Earl Lasater	Jackson
Jennings Bryan Liles	Escambia
Frank Corry Lipscomb	Lee
John Bannister Leek	Etowah
John Catlett Martin, Jr.	Georgia
Victor Irwin Masters	Georgia
Oliver Norfleet Massengale	Elmore
Neil Carpenter Miller	Montgomery
Gordon Wright Morton	Lee
John Herbert Murray	Escambia
William Franklin McLemore	Talladega
James Gay Nall	Jefferson
Carl Frederick Nonnemacher	Calhoun
Douglas Gordon Pamplin	Lauderdale
James Elliotte Peck	Morgan
Byron Yarbrough Pennington	Covington
Julius Albert Peterson	Coosa
Samuel Matthews Phillips	Georgia
Burke Dulain Ponder	Georgia
James L. Rouse	Elmore
James Donald Russell	Calhoun
Yetta Glenn Samford	Montgomery
Atlee Davis Sample	Morgan
Mortimer Dewey Sanders	South Carolina
William Hardin Saunders	Tennessee
Bluford Guy Sharp	Randolph
Byron William Smith	Jefferson
Clifford Augustus Smith	Jefferson
Cornelius Clyde Smith	Lee
Jane Smith	Lee
Salideon Aulius Spencer	Hale
Williard Lamont Stevens	Mississippi
Alexander Ogden Taylor	Florida
John Simpson Tennent	North Carolina
Charles Thigpen	Lowndes

Junie Marcus Thomason	Lamar
Ira Asa Thompson	Pike
George Samuel Ticknor	Georgia
Adassa Urieli	Jefferson
George Vincent Walker	Morgan
Alfred Benjamin Walter, Jr.	Louisiana
Joseph Reese Wampler	Jackson
Charles Spencer Warren	Montgomery
James Frederick Watson	Jefferson
Ulon Victor Wellons	Georgia
James Wallace Whatley	Lee
Walter Alexander Whatley	Lee
Robert Nelson White	Montgomery
Felix Henry Williams	Lee
Robert Fleming Williford	Lee
Lamar Monroe Wise	Georgia
Gordon Worley	Tallapoosa
Andrew Jackson Wynne	Marengo
Robert Wynne, Jr.	Georgia
Michael Vernon Zimmerman	Jefferson

SUMMARY

Graduate Students	32
Senior Class	110
Junior Class	86
Sophomore Class	105
Freshman Class	234
Pharmacy	36
Veterinary Medicine	73
Mechanic Arts	14
Two-Year Course in Applied Electricity	28
Two-Year Course in Agriculture	52
Irregular Students	115
	<hr/> 885
Deduct for names counted twice	5
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Total	880

NUMBER OF STUDENTS IN EACH SUBJECT OF STUDY

English	501	Landscape Gardening	27
History	466	Geology	82
French	30	Civil Engineering	61
German	39	Surveying	408
Spanish	68	Sanitary Engineering	17
Latin	82	Hydraulics	28
Education	182	Structural Design	40
Political Economy	54	Electrical Engineering	117
Mathematics	480	Mechanical Engineering	217
Chemical Laboratory	197	Mining Engineering	10
Chemistry	472	Architecture	15
Agronomy	405	Mechanical Drawing	346
Animal Husbandry	482	Machine Design	95
Physics	308	Agricultural Drawing	52
Botany	165	Descriptive Geometry	78
Entomology	51	Mechanic Arts	432
Zoology	67	Mineralogy	14
Horticulture	172	Physiology	155
Forestry	44	Veterinary Science	97
Veterinary Medicine	73	Pharmacy	48
Military Department	802		

RESIDENCE BY STATES.

Alabama	692
Georgia	66
Florida	28
South Carolina	24
Tennessee	21
Mississippi	18
Louisiana	8
Texas	7
North Carolina	4
Kentucky	2
Missouri	1
West Virginia	1
Wisconsin	1
Mexico	3
China	2
Cuba	1
Russia	1

SUMMER SESSION

JUNE 10 TO JULY 21, 1915.

CATALOGUE OF STUDENTS.

Lucile Adcock	Tallapoosa
Olive Addison	Macon
Josephine Allen	Georgia
John Gill Anderson	Tennessee
Austin Elser Arthur	Marion
William King Askew	Marengo
Evelyn Ayres	Mississippi
Roe Ballow	Marengo
Sarah Ruffin Bandy	Limestone
Costa Boone Barker	Cleburne
Vida Barker	Cleburne
James Arthur Bates	Chambers
Carl Lee Beall	Crenshaw
Roy Samuel Beall	Crenshaw
Modesta Beasley	Lee
Addie Bell	Lowndes
James William Lee Benson	Georgia
Herman West Bingham	Madison
Mayfus Bird	Marengo
Mrs. W. C. Blasingame	Conecuh
J. B. Bledsoe	Coffee
Lula Bledsoe	Coffee
William P. Bledsoe	Wilcox
Albert Bonds	Greene
Oscar Carson Bottoms	Marion
Martha Elizabeth Boyd	Lee
Thomas Massie Boyd	Texas
J. S. Branyon, Jr.	Lamar
William Hayden Brooks	Jefferson
Brisbane Hanks Brown	Texas
Walter Frederick Bulla	Washington, D. C.
Jesse Samuel Burbage	Jefferson
Hugh Otis Burgess	Cleburne
J. D. Burkhead	Lee
George Larkin Burleson	Marion
Robert Emmett Cammack	Clarke
James Reid Campbell, Jr.	Macon
John Willis Campbell	Marshall
Maude Carlisle	Lee
Ernest Carnes	Marion
Eugene Leon Caton	Jefferson
Kenneth Gladstone Caughman	South Carolina
D. Arnold Caylor	Bullock
Linney Leonidas Childree	Dale
W. T. Clearman	Lamar
Birdie Cline	Lee
William Davis Crawford	Macon
Luther E. Creel	Marshall
William Velpeau Curtis	Lee
Emma Davis	Montgomery
Vashti Davis	Macon
R. H. Dickinson	Antauga
Louie Dillard	Lee
William Reese Dillard	Georgia

Bernard Arthur Douglas	Crenshaw
Cordelia Dowdell	Montgomery
Jesse Wallace Drake	Lee
Allen Drew	Mobile
Francis Camp Duggar	Lee
Llewellyn Goode Duggar	Lee
Margaret Duggar	Lee
Thomas Duncan	Lee
Lillian Gladys Fargason	Chambers
John Charles Ferris	Georgia
Mary Flanagan	Lee
Joseph Marshall Foulks	Louisiana
James Michael Fullan	Lee
John Hart Fussell	Geneva
Dana Gatchell	Lee
Lillian Gardner	Chambers
Lorene Garner	Lee
Kate Gilchrist	Geneva
Sara Gregory	Marengo
Ila Dean Griffin	Walker
Orleana Lamar Grigg	Jefferson
Ethel Adell Hadaway	Georgia
Adolphus Alexander Hale	Sumter
Joe John Haralson	Lee
Cosette Woodley Harrison	Montgomery
Franklin Augustus Hart	Montgomery
William Caesar Hearn	Tuskegee
Annie Henderson	Tallapoosa
Emma Henderson	Tallapoosa
Perry Anderson Hewitt	Montgomery
Kirk Theron Holley	Marion
Arthur William Holstun	Jefferson
E. P. Hood	Dallas
Walter Lucian Howard	Marshall
L. J. Howell	Winston
Mrs. L. J. Howell	Winston
Charles L. Isbell	DeKalb
William Jesse Isbell	DeKalb
William Schloss Jacobs	Georgia
B. M. Johnson	Marengo
Neal Corbly Johnson	Colbert
Marie Jones	Lee
Thomas Jordan	Marshall
William Lewis Kellum	Shelby
Virginia Katherine Kernodle	Tallapoosa
John Edward Key	Chambers
Eleanor Kidd	Shelby
Dorothy Kimball	Lee
Edgar Kimball	Lee
Lee Eugene Kimball	Lee
C. C. King	Coosa
George Lampros	Montgomery
Carolyn Lamar	Bibb
Cecil Lamb	Florida
Jane Laxon	Limestone
Mattie Lee	Chambers
Walter Lee	Conecuh

L. Leftwich	Shelby
Hester Marion Lewis	Bibb
George Ernest Lumpkin	Marshall
Maude Luttrell	Calhoun
Hilary Herbert McGinty	Georgia
Mae Lily McGinty	Georgia
Leila McGregor	Walker
Julia E. McGuire	Macon
Clyde Fuller McLendon	Montgomery
Mildred McLendon	Tallapoosa
Josephine Virginia McWhorter	Montgomery
Homer Hosea Ballou Mask	Lee
Phares Wood Matthews	Jefferson
Mrs. J. F. Messick	Lee
Jay Millican	Marion
Ernest Bushrod Mills	Autauga
Mrs. Ernest Bushrod Mills	Autauga
Sibbie Moore	Lee
Maria Augusta Moseley	Dallas
James Gay Nall	Jefferson
Frederick M. Nelson	Mississippi
William Belmont Nickerson	Georgia
James Little Oliver	Sumter
Lex Owens	Pike
Sara Pace	Lee
Jessie Palmer	Lee
C. A. Peavy	Escambia
John Williams Persons	Montgomery
George Arthur Pfaffmann	Lee
Pierce R. V. Pettis	Clarke
Frank Poole	Butler
Myrt Warren Pouncey	Escambia
Osie Clyde Prather	Lee
Mary Clyde Prince	Lee
Viola Reid	Barbour
Mary Belle Richardson	Macon
Ralph Waldo Riddle	Jefferson
Thomas Christopher Rives	Montgomery
Walter Hugh Roberts	Baldwin
Mary Jane Ross	Tallapoosa
Nora Letitia Rothrock	Lee
Frances Rutland	Georgia
Gilbert Grover Samson	Jefferson
Edward Noble Scoville, Jr.	South Carolina
Thomas Jones Sellers	Tallapoosa
Cleveland Gillespie Sharp	Morgan
Philip Nicholas Sowell	Escambia
Salideon Aulius Spencer	Greene
Katie Belle Spradling	Macon
Mrs. John Starke	Henry
Lannie Steadham	Lee
Vassie Steele	Geneva
Maye Steely	Geneva
W. R. Stephens	Lee
Ruth Stodghill	Lee
Dewey Elbridge Tanner	Mobile
Annie Myrtle Tatum	Lee

Anne Taylor	Marengo
Francis Marion Taylor	Lee
George Ellis Taylor	Jefferson
Annie Elizabeth Terrell	Lee
Jamie Marcus Thomason	Lamar
A. E. Thompson	Walker
Esther Thompson	Randolph
Exa Thornton	Tallapoosa
Lionel Earl Tisdale	Florida
Lovell Lack Turley	Missouri
Edward LeRoy Tuttle	Houston
Chester C. Van Osdol	Lowndes
Ross Franklin Wadkins	Lee
Mary Frank Wallace	Chambers
Elsie Waller	Macon
Mary Ruth Waller	Macon
James Hubert Walls	Marshall
Laura Watt	Lee
Walter Alexander Whatley	Lee
Robert Nelson White	Montgomery
Clinton Edward Williams	Crenshaw
E. D. Williams	Houston
Jessie Jay Williams	Clarke
Mrs. Jessie Jay Williams	Clarke
Thomas McCottry Williams	Montgomery
Robert Fleming Williford	Lee
Annie Merle Wills	Georgia
Permilla Wilson	Bullock
Samuel Andrew Wingard	Montgomery
Mary Belle Wise	Lee
Edward Reuben Wren	Talladega
Mrs. Ida Yarbrough	Talladega
Mary Lou Yeldell	Escambia
Braxton Zuber	Lee
Ruth Zuber	Lee

MILITARY ORGANIZATION

SESSION 1915-1916.

President.

CHARLES C. THACH.

Commandant.

COL. BENJAMIN S. PATRICK.

Surgeon.

J. H. DRAKE.

Bandmaster.

MAJOR A. L. THOMAS.

Regimental Staff.

Cadet Captain W. C. Payne, Adjutant.

Cadet Captain A. O. Jackson, Quartermaster.

Cadet Captain S. A. Wingard, Commissary.

Regimental Non-Commissioned Staff.

Cadet Sergeant W. T. Shinholser, Sergeant Major.

Cadet Sergeant H. M. Lewis, Quartermaster Sergeant.

Cadet Sergeant A. H. Dumas, Color Sergeant.

Cadet Sergeant J. W. Webb, Color Sergeant.

Cadet Sergeant L. L. Turley, Drum Major.

First Battalion.

Cadet Major C. E. Newman.

Cadet First Lieutenant J. D. Browne, Adjutant.

Cadet Second Lieutenant J. D. Russell, Commissary.

Cadet Sergeant E. L. Deal, Sergeant Major.

Cadet Captains.

Company A.	Company B.	Company C.	Company D.
V. J. Douglass	W. B. Persons	H. L. P. King	G. R. Corcoran

Cadet First Lieutenants.

W. H. Carter	G. R. Smith	H. L. Evans	R. M. Fricke
W. D. Crawford	G. L. Washington		

Cadet Second Lieutenants.

O. M. Schomburg	G. A. Miller
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Cadet First Sergeants.

G. R. Bowling	P. A. Terrell	R. H. Thach	J. W. Johnston
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Cadet Sergeants.

A. B. Chapman	W. R. Lassiter	J. R. Hines	F. H. Prendergast
T. Jordan	F. W. Burns	F. K. Simmons	H. B. Emerson
W. K. Askew	G. A. Kaufmann	D. A. Helmich	H. O. Burgess
	L. B. McCoy	H. H. House	W. M. Bruce

Cadet Corporals.

J. H. Witherington	J. A. Strozier	W. H. Withington	W. W. Allen
B. A. Storey	O. H. Schultz	J. T. Fowler	W. A. Guess
J. B. Mayes	O. L. Martin, Jr.	R. Lapsley	J. C. Ard
R. E. Davis	C. E. Snead	O. N. Massengale	J. S. N. Davis
W. C. Hearn	J. H. Martin	E. O. Duffey	A. J. Kirby
	J. M. Sparrow	J. R. Nesbitt	L. H. Heyman
	B. H. Brown	G. E. Burgin	

Second Battalion.

Cadet Major E. W. Smith.

Cadet First Lieutenant C. B. McManus, Adjutant.

Cadet Second Lieutenant W. H. Roberts, Commissary.

Cadet Sergeant L. M. Ware, Sergeant Major.

Cadet Captains.

Company E.	Company F.	Company G.	Company H.
W. M. Billing	A. E. Hayes	J. W. Andrews	E. S. Gatchell

Cadet First Lieutenants.

P. J. Edwards	J. C. Mohns	J. D. Ashcraft	G. D. Liddell
A. P. McCrary	B. W. Davis	J. G. Woodall	E. Slager

Cadet Second Lieutenants.

W. W. Wood	E. L. Tuttle
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Cadet First Sergeants.

J. P. Shaffer	R. M. House	H. P. Sparkes	J. M. Ward
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Cadet Sergeants.

Y. G. Samford	J. C. Powell	G. E. Weber	W. L. Blanton
C. L. Isbell	J. P. Robertson	R. G. Carpenter	J. H. Scott
C. R. Carnes	A. B. Pimm	P. W. Matthews	H. W. Thomason
W. A. Stickney	J. J. Warren	H. B. Seybt	
		J. F. Pruett	

Cadet Corporals.

E. A. Phillips	J. H. Hamilton	W. S. Black	W. C. McKay
S. W. Hill	W. W. Sullivan, Jr.	E. E. Ruffin	W. C. Sills
R. E. Britnell	J. T. Hudson	R. T. Kernahan	E. C. Atkins
D. B. Van Pelt	G. L. Burleson	Y. Elizondo	S. B. Hooper
W. J. Ross	C. Savage	J. A. Peterson	G. B. Hawthorne.
		H. Herzberg	T. A. Sims
		W. L. Liddell	
		R. B. Ashe	

THE CADET BAND

Session 1915-16.

A. L. THOMAS, Bandmaster.

P. R. BIDEZ, Assistant.

Military Officers.

L. A. McCranie	Lieutenant
L. L. Turley, Drum Major	Sergeant
J. M. Kelly	Sergeant
J. A. Douglas	Sergeant
A. L. Scarbrough	Sergeant
R. R. McAdory	Corporal

Honorary Members.

S. J. Smith	D. A. Gammage	F. H. Haynie
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Musicians.

Cornets.

L. A. McCranie
W. T. Mills
T. M. Brannon
E. C. Whitfield
L. G. Duggar
M. E. Lasater
M. B. Roberts

Flute and Piccolos.

J. A. Douglas
J. A. Duncan
J. D. Foster

Baritones.

H. P. Harris
W. M. Stewart

Basses.

F. H. Haynie
G. A. Mattison

Clarinets.

P. R. Bidez
S. J. Smith
E. H. Hargis
R. R. McAdory
A. L. Scarbrough

Trombones.

J. C. Lawton
R. P. Simmons
T. B. Gilbert
J. H. Owens

Altos.

D. A. Gammage
J. M. Kelly
W. S. Hackworth
A. T. Levie

Saxophone.

M. G. Crosthwait

Drummers.

Snare and Traps.

F. M. Taylor

Bass Drum.

C. B. Crow

Bugle Corps.

J. W. Anderson
E. T. Enslen
D. H. Holder

H. Riley
N. B. Wentworth
E. D. Williams

Cadets of the graduating class who were reported to the Adjutant General, U. S. Army, as having ranked highest in the Military Department:

1889
A. St.C. Dunstan
B. H. Crenshaw
A. J. Burr

1890
F. D. Milstead
J. W. Bivins
G. W. Emory

1891
L. E. Baker
C. C. Johnson
F. J. Bivins

1892	1900	1908
H. F. Dobbin	E. M. Mason	S. A. Ellsberry
A. L. Jones	H. P. Powell	C. M. Howard
C. L. Brown	C. W. Nixon	R. H. Liddell
1893	1901	1909
Joel Dumas	A. F. Jackson	J. W. Powell
C. H. Smith	J. D. Foy	S. H. Richardson
J. F. Webb	P. S. Haley	T. Beasley
1894	1902	1910
C. S. Andrews	W. D. Willis	D. M. Clements
P. P. McKeown	J. E. D. Yonge	C. C. Yonge
R. L. Dorsey	J. B. Garber	J. M. Spearman
1895	1903	1911
S. L. Coleman	H. E. Davis	J. E. Davis
H. H. Smith	H. M. Yonge	J. J. Cater
L. B. Gammon	T. J. Dowdell	G. Lothrop
1896	1904	1912
A. L. Alexander	J. McDuffie	S. R. Cruse
W. L. Fleming	B. L. Shi	C. C. Thach, Jr.
W. M. Williams	Geo. Dunglinson, Jr.	F. L. Jenkins
1897	1905	1913
P. G. Clark	R. P. Boyd	R. A. McGinty
G. M. Holley	R. M. McCulloh, Jr.	D. L. Taylor
G. N. Mitcham	J. H. Paterson	H. C. Hanlin
1898	1906	1914
A. H. Clark	W. H. Foy	R. E. Herring
A. McB. Ransom	F. H. Mohns	W. B. Tisdale
John Haralson	M. A. Frazer	E. F. Barry
1899	1907	1915
I. F. McDonnell	N. B. McLeod	D. D. Gibson
A. H. Feagin	W. L. Purdue	C. A. Donehoo
T. W. Wert	G. F. Lipscomb	W. F. Littleton

REQUIREMENTS FOR ADMISSION

APPLICATION.

All applicants for entrance to any department of the College should make application to the Registrar as early as possible before the opening of the session (September 13, 1916). Those who desire to be admitted by certificate should make application as soon as possible after their graduation from the High School. To all applicants a blank will be furnished which they are expected to fill out and file with the Registrar in advance of entrance.

All applicants for admission must present testimonials of good moral character, and those who come from other colleges must bring certificates of honorable discharge or furnish other testimonials of good moral character.

Entrance examinations will begin on Monday, September 11th. These examinations will be required of all students entering college for the first time, except those who bring certificates from accredited high schools or preparatory schools or from reputable colleges or universities.

REGISTRATION.

Students upon their arrival in Auburn should report promptly to the President.

All students are required to register on the first day of the session and on the opening day after the Christmas vacation. Registration at a later date involves additional administration work to the College and seriously affects the work of the student. An additional fee of \$2.00 will be charged for registration after September 16th and January 3rd. No exception will be made to this regulation.

All students, whether applicants for regular or irregular courses, are required to report for classification to the Chairman of the Committee on Entrance Examinations who will give them cards of admission to the classes to which they are assigned.

ADMISSION TO THE FRESHMAN CLASS.

To enter the freshman class the applicant must be not less than fifteen years of age.

For unconditional admission to any bachelor's course, or to the Veterinary College, a student will be required to present fourteen entrance units.

A unit is defined as a high school or preparatory course of five periods of forty or forty-five minutes each, weekly, throughout the academic year of nine months. In science courses, two laboratory periods are counted as the equivalent of one

recitation period. Credits of less than one unit may be granted for courses that do not run full time. No more than four units will be given for one year's work in the high school.

Students who wish to enter the regular courses and are deficient in entrance requirements may enter and be classified as conditioned students provided their deficiencies do not exceed two units.

For entrance to any of the special courses that do not lead to degrees, applicants must give evidence of satisfactory preparation for pursuing the work as outlined in the catalogue. In accordance with the requirements of the American Conference of Pharmaceutical Faculties, for entrance to the two-year course in pharmacy leading to the degree of Graduate in Pharmacy, at least two years of high school work are required.

Of the fourteen units required for admission in full standing to the freshman class, seven and a half are prescribed as follows:—

Mathematics $3\frac{1}{2}$ units:

High School Arithmetic.

Algebra, complete.

Plane and Solid Geometry.

English 3 units:

High School Grammar.

Rhetoric and Composition.

History of American or English Literature.

Classics.

High School History of the United States 1 unit.

ENTRANCE SUBJECTS.

Credit for admission will be given for any high school subject properly taught.

The principal subjects in which units may be offered for entrance are as follows:

Algebra	.....$1\frac{1}{2}$	units	English History	....1	unit
Advanced Arithmetic	.....$\frac{1}{2}$	unit	Pedagogy	.....$\frac{1}{2}$	unit
Plane Geometry	....1	unit	Psychology	.....$\frac{1}{2}$	unit
Solid Geometry	....$\frac{1}{2}$	unit	French	.....1 to 2	units
Trigonometry	....$\frac{1}{2}$	unit	German	.....1 to 2	units
High School Grammar	.....$\frac{1}{2}$	unit	Spanish	.....1 to 2	units
Rhetoric and Composition	.....$1\frac{1}{2}$	units	Latin Grammar	....1	unit
History of American or English Literature	....1	unit	Caesar	.....1	unit
Advanced U. S. History	.....1	unit	Cicero	.....1	unit
Ancient History	....1	unit	Virgil	.....1	unit
Mediaeval and Modern History	....1	unit	Greek	.....1 to 2	units
			Commercial Geography	.....$\frac{1}{2}$	unit
			Physical Geography	.....$\frac{1}{2}$	unit
			Agriculture	....$\frac{1}{2}$ to 2	units
			Zoology	.....$\frac{1}{2}$ to 1	unit
			Physiology	....$\frac{1}{2}$ to 1	unit

Biology	$\frac{1}{2}$ to 1 unit	Freehand Draw-	
Physics	$\frac{1}{2}$ to 1 unit	ing	$\frac{1}{2}$ to 1 unit
Chemistry	$\frac{1}{2}$ to 2 units	Music	$\frac{1}{2}$ to 3 units
Botany	$\frac{1}{2}$ to 1 unit	Bookkeeping ..	$\frac{1}{2}$ to 1 unit
Civil Govern-		Stenography and	
ment	$\frac{1}{2}$ to 1 unit	Typewriting ..	$\frac{1}{2}$ to 1 unit
Shop Work	$\frac{1}{2}$ to 2 units	Domestic	
Mechanical Draw-		Science	$\frac{1}{2}$ to 2 units
ing	$\frac{1}{2}$ to 2 units		

ADMISSION BY CERTIFICATE.

Students presenting official statements from the schools listed below will be given entrance credit for all work completed. Those having 14 units will be admitted to full standing in the freshman class. Those having 12 units will be classed as conditioned freshmen, and the remaining 2 units must be removed by the beginning of their junior year. Not more than four units will be given for any one year's school work.

All students are strongly advised to complete the full course given in their schools before applying for admission to college.

Certificate Schools.

1. State Normal Schools.
2. District Agricultural Schools and County High Schools.
3. The following city, denominational, and private schools in Alabama:

Alabama City High School, Alabama City	J. D. Bradley
Alexander City High School, Alexander City	J. M. Pearson
Andalusia High School, Andalusia	L. E. Brown
Anniston High School, Anniston	D. R. Murphy
Green University School, Athens	W. K. Green
Bay Minette High School, Bay Minette	S. M. Tharpe
Bessemer High School, Bessemer	A. A. Persons
Central High School, Birmingham	C. A. Brown
University High School, Birmingham	J. J. White
High School, Boaz	J. C. McAuley
Snead Seminary, Boaz	L. F. Corley
Brewton High School, Brewton	W. L. Porter
High School, Camp Hill	C. C. Moseley
Industrial Institute, Camp Hill	L. Ward
Carrolton High School, Carrolton	C. Willbourn
High School, Citronelle	B. H. Johnston
High School, Collinsville	H. G. Tiller
Cordova High School, Cordova	J. W. Smith
High School, Cuba	M. E. Head
Decatur High School, Decatur	J. M. Collier
Demopolis High School, Demopolis	K. G. Hoover
Dothan High School, Dothan	J. V. Brown
High School, Elba	J. F. Scofield
High School, Ensley	R. L. Dimmitt
Eufaula High School, Eufaula	H. L. Upshaw

Eutaw High School, Eutaw	A. F. Jackson
High School, Florence	H. B. Norton
Gadsden High School, Gadsden	W. C. Griggs
Geneva High School, Geneva	J. E. Cheatham
Georgiana High School, Georgiana	P. B. Pepper
High School, Gordo	W. T. Snoddy
Greenville High School, Greenville	C. B. Gamble
Haleyville High School, Haleyville	L. L. James
Goodrich School, Huntsville	J. C. Goodrich
Huntsville High School, Huntsville	R. C. Johnston
LaFayette High School, LaFayette	F. T. Appleby
High School, Lanette	W. L. Leatherwood
Linden High School, Linden	W. T. Cardwell
High School, Livingston	R. K. Hood
Luverne High School, Luverne	W. G. Cameron
High School, Madison	T. G. Riddle
Mobile High School, Mobile	S. S. Murphy
University Military School, Mobile	J. T. Wright
Sidney Lanier High School, Montgomery	C. L. Floyd
Barnes' School, Montgomery	E. R. Barnes
Edgar's School for Boys, Montgomery	R. B. Edgar
University School, Montgomery	J. M. Starke
New Decatur High School, New Decatur	R. W. Cowart
Baptist Collegiate Institute, Newton	A. W. Tate
High School, Opelika	S. O. White
Opp High School, Opp	J. M. Ferris
High School, Ozark	E. T. Laney
High School, Pine Apple	B. B. McLenan
Roanoke High School, Roanoke	L. L. Vann
High School, Samson	W. T. Tiller
Selma High School, Selma	A. F. Harman
High School, Sheffield	W. P. Johnson
Slocomb High School, Slocomb	E. C. Palmer
High School, Stevenson	N. H. Price
High School, Sulligent	W. V. Luckly
Talladega High School, Talladega	D. A. McNeill
Thomasville High School, Thomasville	H. M. Morrow
Thorsby Institute, Thorsby	John Savage
Unity-Chilton Baptist High School, Thorsby	J. A. Pool
High School, Troy	Jno. R. McLure
High School, Tuscaloosa	J. W. Foster
Tuscumbia High School, Tuscumbia	J. F. Collins
Tuskegee High School, Tuskegee	R. E. Thompson
Union Springs High School, Union Springs	E. S. Pugh
High School, Uniontown	W. P. Champion

4. Schools in other States which are accredited to institutions of equal rank with the Alabama Polytechnic Institute.

ADVANCED STANDING.

Advanced standing in any subject is not given on preparatory school credits, and can be obtained only by an examination conducted by the professor of that subject.

Advanced standing is given for work done in other colleges of similar rank, and for work done by graduates of the State

Normal Schools at Florence, Jacksonville, Livingston and Troy, of Marion Institute, of Highland Home College, St. Bernard College, of Spring Hill College and the Alabama Presbyterian College, of Anniston.

ADMISSION OF YOUNG WOMEN.

Young women of mature mind and character, who are at least seventeen years of age, will be admitted. Upon the approval of the faculty, applicants may be admitted at an age less than seventeen years if a resident of Auburn will act as guardian.

The only conditions imposed will be that they engage in earnest study and attend the exercises regularly. They will board in town with private families and will attend college only at the hours of their exercises.

NUMBER OF EXERCISES REQUIRED.

All students are required to have *not less than fifteen* recitations per week, or the equivalent, in addition to the exercises in laboratory work, drawing, and military drill. These additional exercises occupy not less than twelve hours per week and in all give twenty-seven to thirty hours per week required in college exercises.

Students shall not be permitted to take more than *five hours* of extra work without special permission of the faculty.

SPECIAL AND IRREGULAR STUDENTS.

Those students who are not able to meet the regular entrance requirements may be admitted to special courses in agriculture, architecture, engineering, chemistry, pharmacy, etc., and will be classified as special or irregular students, provided they are prepared to do satisfactory work in the subjects which they desire to take.

The privilege of taking irregular courses will be granted only to those students who are of age or to those whom for special reasons the faculty may grant permission. Students who are not of age will not be permitted to enter a special or irregular course without the written permission of parent or guardian.

A student to whom this privilege has been granted will be assigned to some member of the faculty who will act as his adviser in regard to his work. The professor in charge of a department will decide whether a special student is prepared for admission to his class.

Those students who are candidates for a degree, but who are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greatest number of studies.

REMOVING CONDITIONS.

At the beginning of each term examinations will be given to those students who wish to remove entrance conditions.

CHANGES IN COURSE.

Special and irregular students may be transferred to any regular course by presenting satisfactory entrance requirements and by standing satisfactory examinations on all the work which they have not taken in that regular course.

Students will be permitted by the faculty to change from one regular course to the same class in another regular course, and will be required to make up only such back work in the new course as is necessary in order to carry on the regular studies in their class.

Permission to change from one course to another will not be granted within two weeks of any term or mid-term examination.

ADMISSION FROM OTHER COLLEGES.

Students coming from another college of similar rank will be assigned to the class to which they would belong in the institution which they have left, and will be required to make up only such back work in the course to which they are assigned as is necessary in order to carry on the regular studies of their class.

COURSES OF INSTRUCTION.

The courses of study include the physical, chemical, and natural sciences, with their applications; agronomy, botany, animal husbandry, horticulture, mechanics, astronomy, mathematics, drawing, civil, electrical, mechanical and mining engineering; architecture; physiology, and veterinary science; pharmacy, English, French, German and Latin languages; history, political economy; mental and moral sciences; education.

The studies are arranged in regular courses so as to offer liberal and practical education as a preparation for the active pursuits of life.

There are ten degree courses for undergraduates, leading to the degree of Bachelor of Science (B. S.) each requiring four years for its completion:

- I. COURSE IN CIVIL ENGINEERING.
- II. COURSE IN ELECTRICAL ENGINEERING.
- III. COURSE IN MECHANICAL ENGINEERING.
- IV. COURSE IN MINING ENGINEERING.
- V. COURSE IN ARCHITECTURE.

- VI. COURSE IN CHEMISTRY AND METALLURGY.
- VII. COURSE IN AGRICULTURE.
- VIII. COURSE IN PHARMACY.
- IX. COURSE IN CHEMICAL ENGINEERING.
- X. GENERAL COURSE.

SHORTER COURSES.

- XI. TWO-YEAR COURSE IN MECHANIC ARTS.
- XII. TWO-YEAR COURSE IN AGRICULTURE.
- XIII. TWO-YEAR COURSE IN PHARMACY (Ph. G.)
- XIV. THREE-YEAR COURSE IN PHARMACY (Ph. C.)
- XV. THREE-YEAR COURSE IN VETERINARY MEDICINE (D. V. M.)
- XVI. TWO-YEAR COURSE IN APPLIED ELECTRICITY.
- XVII. COURSE FOR ROAD FOREMEN AND INSPECTORS.
- XVIII. ONE-YEAR COURSE IN WIRELESS TELEGRAPHY.
- XIX. TWO-YEAR COURSE IN MINING.

Special Course in Agriculture.—Young men over twenty-one years of age who desire to study agriculture will be permitted without examination to enter classes in agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied. They may attend the lectures in agriculture in all the classes and engage in the practical work at the experiment station, in the field, stock-yard, dairy, garden, orchard, vineyard, etc., and may thus in one year acquire valuable practical knowledge of scientific agriculture.

Course I. includes the principles and applications of the sciences that directly relate to civil engineering, and is adapted to those who expect to enter that profession.

Course II. includes, besides the general principles and applications of the sciences, a special course in the applications of electricity and mechanics, and is arranged to fit men for the profession of electrical engineering.

Course III. furnishes instruction in steam engineering, materials of construction, drawing and machine design, electrical engineering, together with laboratory work. The course is intended to qualify men to fill positions in the manufacturing industries.

Course IV. includes theoretical and practical instruction in geology, mineralogy; chemistry, civil and electrical engineering, as applied to mines, mapping, exploration; boring, ventilation; timbering, and all the operations pertaining to the profession of mining engineering.

Course V. has been arranged to give theoretical and practical knowledge of architecture in order to enable students to take advantage of office opportunities upon graduation. It embraces architectural drawing and design, history, and ornamental architectural engineering, and office practice.

Course VI. provides for thorough theoretical and practical instruction in pure and technical chemistry and metallurgy, and in scientific branches relating thereto. Students taking this course also pursue the study of German or French during the junior and senior years, and are thus prepared to utilize for reference and for study, scientific journals and works published in those languages.

Course VII. includes theoretical and practical instruction in those branches that relate to agronomy, horticulture, animal husbandry, botany, and entomology, and is especially adapted to those who intend to devote themselves to agricultural and horticultural pursuits.

Course VIII. includes, besides the general education of Course X. of the lower classes, a special course in pharmacy and chemistry, and is adapted to those who expect to become pharmacists, manufacturing chemists, or to enter upon the study of medicine.

Course IX. has been arranged for students who desire preparation for chemical engineering work with special reference to planning, construction and operation of plants employed in the chemical industries, such as manufacture of fertilizers, sugars, ceramics, oils, and fats, and their products, coal by-products, etc., etc.

Course X. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as those who intend ultimately to engage in teaching or in some commercial or professional business.

Courses XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., and XIX., have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years and to take one of the regular degree courses.

DEGREES.

Each applicant for a degree must submit his application and course of study by the first of October in his senior year.

No degree will be conferred upon a candidate *in absentia* unless he is officially excused for providential reasons.

The degree Bachelor of Science will be granted to those students who satisfactorily complete one of the regular four-year courses.

A student who completes the work of the two-year course in pharmacy and submits a satisfactory thesis will be granted the degree of Graduate in Pharmacy (Ph. G.)

A student who completes the work of the three-year course in pharmacy and submits a satisfactory thesis, will be granted the degree of Pharmaceutical Chemist (Ph. C.)

A student who completes the work of the three-year course in veterinary medicine and submits a satisfactory thesis, will be granted the degree of Doctor of Veterinary Medicine (D. V. M.)

CERTIFICATES.

A student who completes satisfactorily all the work of the senior class in a department, including the laboratory work, with approval of the faculty, may be awarded a certificate of proficiency in that subject.

Students who complete one of the two-year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

No certificate of proficiency will be given in any course unless the applicant has passed a satisfactory examination in elementary English. Every applicant for a certificate will be required to stand this special examination during the final year.

GRADUATE COURSES.

A more extended course of study may be taken by a graduate of this institution or of any college of equal grade. The completion of a course which leads to a post graduate degree of Master of Science requires one year's residence, spent in the satisfactory prosecution of a course of study, with such laboratory work as may be approved by the faculty.

The candidate must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to his course, and must pass an examination at the close of each term, on the course of study prescribed, in which he must attain a grade of 75 per cent. The examination is written, and also oral in the presence of the faculty.

The subject for the thesis must be submitted to the faculty for approval prior to January first, and the thesis given to the professor by May first.

Applicants for a post-graduate degree and special students in post-senior studies are subject to the same general regulations as other students, and *pay the same fees*, but are exempt from all military duty.

The following courses are prescribed for the degrees named:

1. *Master of Science*.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class; or in special cases, with the approval of the faculty, a student may devote his full time to work in two departments, in each of which he has completed the full senior course.

2. *Master of Science in Pharmacy*.—Pharmacy and Chemistry.

PROFESSIONAL DEGREES IN ENGINEERING.

1. *Degrees in Course*.—The professional degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, Chemical Engineer, or Engineer of Mines will be conferred upon graduate students upon the satisfactory completion of the course of study prescribed, a residence of one year at the institute being required for the completion of those courses.

A written application stating the degree desired and the course of study selected must be submitted to the faculty at the beginning of the session. A satisfactory thesis must be submitted by May first.

The following courses of study are prescribed for the degrees named:

Civil Engineer.—Civil Engineering and any two subjects selected from the following: Mathematics, analytical mechanics, mechanical engineering, electrical engineering, mining engineering, bacteriology.

Electrical Engineer.—Electrical engineering and mechanical engineering, or electrical engineering, mathematics and civil engineering.

Mechanical Engineer.—Mechanical engineering and machine design, or mechanical engineering, mathematics and mining engineering.

Chemical Engineer.—Electro-chemistry and advanced analytical or organic chemistry, together with one or more subjects selected from the following: Mechanical engineering, machine design, electrical engineering, mining engineering.

Engineer of Mines.—Graduate students who have completed the course in mining engineering may apply for this degree. The subjects to be pursued are mining engineering, civil engineering, and one other technical subject relating to mining and metallurgy, and approved by the faculty.

II. *Degrees for Professional Work*.—The above named professional degrees may be conferred upon graduates of the Alabama Polytechnic Institute in civil, electrical, mechanical,

chemical, and mining engineering, upon complying with the following requirements.

1. The candidate must have spent at least four full years in the practice of that branch of engineering in which he graduated.

2. An approved thesis must be submitted to the faculty not later than May 1st of the year in which the degree is sought.

3. The student must show that he has filled satisfactorily a responsible position in charge of important engineering work. Written testimonials from employers or clients will be accepted as evidence of satisfactory service.

4. A written application, stating the degree desired, and giving a report or outline of the professional work upon which the application is based, must be submitted not later than January 1st of the year in which the degree is to be granted.

III. Special Students in Graduate Studies.—Students who are not graduates, but are qualified in special subjects to prosecute graduate studies, and desire to prepare themselves more thoroughly for professional or special work in any of the departments of engineering, in chemistry, pharmacy, veterinary science, or other subjects in which instruction is given, may, when qualified, with approval of the faculty, enter this higher department of study and have all the privileges of post-graduate students.

A certificate of proficiency will be given when any one subject of a post-graduate course is satisfactorily completed.

Two degrees will not be given the same year.

LABORATORIES.

Laboratory instruction constitutes an important feature in the course of education provided for the students and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in the following departments:

- I. CIVIL ENGINEERING, FIELD WORK, SURVEYING, ETC.
- II. ELECTRICAL ENGINEERING, TELEPHONE ENGINEERING.
- III. MECHANICAL ENGINEERING.
- IV. MECHANIC ARTS.
- V. MINING ENGINEERING, MINERALOGY.
- VI. ORE DRESSING.
- VII. ARCHITECTURE.
- VIII. TECHNICAL DRAWING, MACHINE DESIGN.
- IX. CHEMISTRY, METALLURGY.

- X. AGRONOMY.
- XI. BOTANY.
- XII. PHARMACY, PHARMACEUTICAL CHEMISTRY.
- XIII. HORTICULTURE.
- XIV. ENTOMOLOGY.
- XV. ANIMAL HUSBANDRY.
- XVI. HISTORY, LATIN.
- XVII. PHYSICS.
- XVIII. MILITARY TACTICS.
- XIX. VETERINARY SCIENCE, BACTERIOLOGY, PHYSIOLOGY.
- XX. WIRELESS TELEGRAPHY.

NOTE.—Special work in Latin or History may be taken by students in the general course as a substitute for laboratory work.

ORGANIZATION

The instruction offered by the College is arranged in four divisions: (1) College of Engineering and Mines, (2) College of Agricultural Sciences, (3) Academic Departments, (4) College of Veterinary Medicine and Surgery.

I. The College of Engineering and Mines offers degree courses in (1) civil engineering, (2) electrical engineering, (3) mechanical engineering, (4) mining engineering, (5) chemical engineering, (6) chemistry and metallurgy, and (7) architecture.

In addition, students in these courses of the college of Engineering and Mines receive instruction in other departments as follows: Mechanical drawing and machine design, English, mathematics, history and Latin, modern languages, physics, chemistry, and military science and tactics.

II. The College of Agricultural Sciences offers regular degree courses in (1) agronomy, (2) chemistry, (3) botany, (4) horticulture and forestry, (5) animal husbandry, and (6) pharmacy; a three-year course in pharmacy; a two-year course in pharmacy; a two-year course in agriculture.

In addition students in the different departments of the College of Agricultural Sciences receive instruction in other departments as follows: English, history and Latin, modern languages, mathematics, mechanic arts, surveying, physics, geology and mining engineering, mechanical drawing and machine design, military science and tactics, and veterinary science.

III. A degree course is offered in the following subjects: Education, political economy, mental science, English, history and Latin, modern languages, mathematics, physics, military science and tactics.

In addition, students in the general course receive instruction in the following technical departments: Mechanic arts, drawing, geology, animal husbandry, chemistry, botany, and agronomy.

IV. The College of Veterinary Medicine and Surgery offers a three-year course leading to the degree of Doctor of Veterinary Medicine. This college comprises the following departments: Veterinary medicine, physiology, surgery, anatomy, therapeutics, pathology, histology, bacteriology, obstetrics, infectious diseases, meat inspection, milk inspection, and animal parasites.

COURSES OF INSTRUCTION

COURSES OF INSTRUCTION

(Note:—The numbers in the Courses of Instruction refer to the subjects as described under "Description of Courses," pages 93 to 170 of this catalogue. The following abbreviations are used: Ac., Academic Departments; Eng., College of Engineering and Mines; Agr., College of Agricultural Sciences; Vet., College of Veterinary Medicine and Surgery; H. Wk., Hours per Week.)

English, German, French, Latin or Spanish, may be taken as language in freshman, sophomore, junior and senior classes, provided there is no conflict in schedule. Education may be substituted for language in junior and senior classes in all courses.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

GENERAL COURSE.

FRESHMAN CLASS.

First Term.

	H. Wk.
English (Ac. 102a) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish ---	3
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Agriculture (Agr. 201, 801) --	2
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) ----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish ---	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) ----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish ---	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) ----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

	H. Wk.
Latin (Ac. 210) or Spanish ---	5
English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Physics (Ac. 504) -----	3
†Mathematics (Ac. 403) -----	5
Botany (Agr. 301) or other	
Science -----	6
Chemical Lab'y (Agr. 110a)	
or other Lab'y -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Latin (Ac. 210) or Spanish ---	5
English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Physics (Ac. 504) -----	3
†Mathematics (Ac. 403) -----	5
Botany (Agr. 301) or other	
Science -----	6
Chemical Lab'y (Agr. 110a)	
or other Lab'y -----	6
Military Drill (Ac. 600) -----	3

Third Term.

Latin (Ac. 210) or Spanish ---	5
English (Ac. 103c) -----	3
History (Ac. 204) -----	2
Physics (Ac. 504) -----	3
†Mathematics (Ac. 404) -----	5
Botany (Agr. 301) or other	
Science -----	6
Chemical Lab'y (Agr. 110a)	
or other Lab'y -----	6
Military Drill (Ac. 600) -----	3
†With approval of faculty other work may be substituted.	

JUNIOR CLASS.

First Term.

	H. Wk.
English (Ac. 107) (a) -----	3
Latin (Ac. 211) (a) or Civics --	3
French (Ac. 301a) (a) or	
Spanish -----	4
German (Ac. 305a) (a) -----	4
Education -----	3
Physics (Ac. 504) -----	3
Military Tactics (Ac. 601) --	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) (a) -----	3
Latin (Ac. 211) (a) or Civics --	3
French (Ac. 301b) (a) or	
Spanish -----	3
German (Ac. 305b) (a) -----	3
Education -----	3
Physics (Ac. 504) -----	3
Military Tactics (Ac. 601) --	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) (a) -----	3
Latin (Ac. 211) (a) or Civics --	3
French (Ac. 301c) (a) or	
Spanish -----	4
German (Ac. 305c) (a) -----	4
Education -----	3
Physics (Ac. 504) -----	3
Military Tactics (Ac. 602) --	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) -----	3

(a) Education may be substituted for one language.

(b) The student may substitute laboratory of any department of natural science for which he may be qualified.

SENIOR CLASS.

First Term.

	H. Wk.
English (Ac. 109) (a) -----	2
Education -----	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205) -----	3
French (Ac. 302a) or Span-	
ish (Ac. 310) (a) -----	4
German (Ac. 306a) (a) -----	4
Geology (Eng. 441) (a) -----	2
History Lab'y (b) (Ac. 206) --	6
Military Science (Ac. 603) --	1

Second Term.

Economics (Ac. 2) (a) -----	2
Education -----	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205) -----	3
French (Ac. 302b) or Span-	
ish (Ac. 310) (a) -----	3
German (Ac. 306b) (a) -----	3
Geology (Eng. 441) (a) -----	2
History (b) (Ac. 206) -----	6
Military Science (Ac. 604) --	1

Third Term.

Economics (Ac. 2) (a) -----	2
Education -----	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205) -----	3
French (Ac. 302c) or Span-	
ish (Ac. 310) (a) -----	4
German (Ac. 306c) (a) -----	4
Geology (Eng. 441) (a) -----	2
History Lab'y (b) (Ac. 206) --	6
Military Science (Ac. 605) --	1

(a) Education may be substituted for one language or for Geology.

(b) The student may substitute laboratory of any department of natural science for which he may be qualified.

COLLEGE OF ENGINEERING AND MINES.

The following studies in the freshman class are prescribed in the courses in civil, electrical, mechanical, mining and chemical engineering, and in architecture and chemistry and metallurgy:

FRESHMAN CLASS.

First Term.

English (Ac. 102a, c) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 401) -----	5

	H. Wk.
Agriculture (Agr. 201, 801) --	2
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term. H. Wk.

English (Ac. 102a, b)	5
History (Ac. 201)	2
Mathematics (Ac. 402)	5
Surveying (Eng. 102)	5
Chemistry (Agr. 101)	4
Drawing (Eng. 601)	5
Mechanic Arts (Eng. 352)	6
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 102a, b)	5
History (Ac. 201)	2
Mathematics (Ac. 402)	5
Surveying (Eng. 102)	5
Chemistry (Agr. 101)	4
Drawing (Eng. 601)	5
Mechanic Arts (Eng. 353)	6
Military Drill (Ac. 600)	3

CIVIL ENGINEERING.

Surveying (Eng. 105):
Forty-eight hours per week for
four weeks immediately after
commencement in summer camp.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
R. R. Surveying (Eng. 104)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
R. R. Surveying (Eng. 106)	4
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Higher Surveying (Eng. 103)	4
Applied Mechanics (Eng. 312)	3

H. Wk.

Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 305)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3
Surveying (Eng. 110): Forty-eight hours per week for four weeks immediately after commencement in summer camp.	

JUNIOR CLASS.

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Roads and Pavements (Eng. 107)	5
Structural Drafting (Eng. 112)	6
*Machine Shop (Eng. 374) or Mineralogy (Eng. 431)	4
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Strength of Materials (Eng. 322)	3
Road Materials Lab'y (Eng. 108)	4
Structural Drafting (Eng. 112)	5
*Machine Shop (Eng. 374) or Mineralogy (Eng. 432)	4
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Strength of Materials (Eng. 322)	3
Road and Street Improvements (Eng. 109)	4
Graphic Statics (Eng. 111)	5
*Machine Shop (Eng. 374) or Mineralogy (Eng. 433)	4
Military Tactics (Ac. 602)	1
Military Drill (Ac. 600)	3

*And Practical Mechanics (Eng. 321).

SENIOR CLASS.

First Term.

	H. Wk.
English (Ac. 108) -----	2
Physics (Ac. 505) -----	2
Geology (Eng. 441) -----	2
Theory of Structures (Eng. 113) -----	5
Railroad Engineering (Eng. 115) or Bacteriology -----	3
Bridge and Structural Design (Eng. 114) -----	9
Military Science (Ac. 603) -----	1
Thesis (Eng. 120) -----	4

Second Term.

Economics (Ac. 2) -----	2
Physics (Ac. 505) -----	2
Geology (Eng. 441) -----	2
Theoretical Hydraulics (Eng. 116) -----	5
Concrete and Masonry Construction (Eng. 118) -----	3
Military Science (Ac. 604) -----	1
Mechanical Engineering Lab. (Eng. 382) -----	4
Thesis (Eng. 120) -----	9

Third Term.

Economics (Ac. 2) -----	2
Astronomy (Ac. 506) -----	2
Geology (Eng. 441) -----	3
Sanitary Engineering (Eng. 119) -----	5
Masonry and Concrete Construction (Eng. 118) -----	3
Practical Hydraulics (Eng. 117) -----	3
Bridge and Structural Design (Eng. 114) -----	9
Military Science (Ac. 605) -----	1

ELECTRICAL ENGINEERING

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 361) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

H. Wk.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Applied Mechanics (Eng. 312) -----	3
Mathematics (Ac. 403) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 362) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 103c) -----	3
Mathematics (Ac. 404) -----	5
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 362) -----	5
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

First Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
Electrical Eng. (Eng. 201) -----	3
Electrical Meas. (Eng. 205) -----	1
Kinematics (Eng. 604) -----	3
Machine Design (Eng. 606) -----	4
Practical Mechanics (Eng. 321) -----	1
Electrical Lab'y (Eng. 206) -----	4
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
Electrical Eng. (Eng. 202) -----	3
Electrical Meas. (Eng. 205) -----	1
Strength of Materials (Eng. 322) -----	3
Machine Design (Eng. 606) -----	4
Practical Mechanics (Eng. 321) -----	1
Electrical Lab'y (Eng. 207) -----	4
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

	H. Wk.
English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
Electrical Eng. (Eng. 203) -----	3
Electrical Tests (Eng. 205) -----	1
Strength of Materials (Eng. 322) -----	3
Machine Design (Eng. 606) -----	4
Practical Mechanics (Eng. 321) -----	1
Electrical Lab'y (Eng. 208) -----	4
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

First Term.

English (Ac. 108) -----	2
Physics (Ac. 505) -----	2
Electrical Eng. (Eng. 210) -----	3
Electrical Lab'y (Eng. 213) -----	4
Electrical Design'g (Eng. 211) -----	2
Telephone Eng. (Eng. 215) -----	2
Telephone Lab'y (Eng. 216) -----	2
Power Plant Eng. (Eng. 331) -----	5
Mech. Eng. Lab'y (Eng. 381) -----	4
Machine Design (Eng. 607) -----	1
Machine Design (Eng. 609) -----	3
Military Science (Ac. 603) -----	1

Second Term.

Economics (Ac. 2) -----	2
Electrical Designing (Eng. 211) -----	2
Electrical Eng. (Eng. 211) -----	3
Electrical Lab'y (Eng. 213) -----	4
Physics (Ac. 505) -----	2
Telephone Eng. (Eng. 215) -----	2
Telephone Lab'y (Eng. 216) -----	2
Street Railways (Eng. 214) -----	2
Thermodynamics (Eng. 332) -----	5
Mech. Eng. Lab. (Eng. 382) -----	4
Machine Design (Eng. 607) -----	1
Machine Design (Eng. 609) -----	3
Military Science (Ac. 604) -----	1

Third Term.

Economics (Ac. 2) -----	2
Astronomy (Ac. 506) -----	2
Electrical Eng. (Eng. 212) -----	5
Electrical Eng. Lab. (Eng. 213) -----	4
Street Railways (Eng. 214) -----	2
Specifications and Contracts (Eng. 219) -----	2

	H. Wk.
Thermodynamics (Eng. 332) -----	5
Mech. Eng. Lab. (Eng. 383) -----	4
Machine Design (Eng. 607) -----	1
Machine Design (Eng. 609) -----	3
Military Science (Ac. 605) -----	1

MECHANICAL ENGINEERING

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 361) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 362) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 103c) -----	3
Mathematics (Ac. 404) -----	5
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 362) -----	5
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

First Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
Kinematics (Eng. 604) -----	3
Graphic Statics (Eng. 605) -----	1
Machine Design (Eng. 606) -----	4
Electrical Eng. (Eng. 204) -----	3
Elec. Eng. Lab'y (Eng. 206) -----	4
Practical Mechanics (Eng. 321) -----	1

	H. Wk.
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
Strength of Materials (Eng. 322) -----	3
Graphic Statics (Eng. 605) -----	1
Machine Design (Eng. 606) -----	4
Electrical Eng. (Eng. 204) -----	3
Elec. Eng. Lab'y (Eng. 207) -----	4
Practical Mechanics (Eng. 321) -----	1
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
Strength of Materials (Eng. 322) -----	3
Graphic Statics (Eng. 605) -----	1
Machine Design (Eng. 606) -----	4
Electrical Eng. (Eng. 204a) -----	3
Elec. Eng. Lab'y (Eng. 208) -----	4
Practical Mechanics (Eng. 321) -----	1
Shop Work (Eng. 371) -----	4
Laboratory (Eng. 377) -----	2
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

First Term.

English (Ac. 108) -----	2
Physics (Ac. 505) -----	2
Electrical Eng. (a) (Eng. 217) -----	3
Heating and Ventilating (Eng. 334) -----	2
Power Plant Eng. (Eng. 331) -----	5
Machine Design (Eng. 607) -----	1
Machine Design (Eng. 608) -----	6
Elec. Eng. Lab'y (Eng. 218) -----	4
Mech. Eng. Lab'y (Eng. 381) -----	4
Thesis (Eng. 384) -----	2
Military Science (Ac. 603) -----	1

Second Term.

Economics (Ac. 2) -----	2
Physics (Ac. 505) -----	2
Hydraulics (Eng. 110) -----	5
Thermodynamics (Eng. 332) -----	5

	H. Wk.
Refrigeration (Eng. 336) -----	2
Machine Design (Eng. 607) -----	1
Machine Design (Eng. 608) -----	6
Mech. Eng. Lab'y (Eng. 382) -----	4
Thesis (Eng. 384) -----	2
Military Science (Ac. 604) -----	1

Third Term.

Economics (Ac. 2) -----	2
Astronomy (Ac. 506) -----	2
Thermodynamics (Eng. 332) -----	5
Metallurgy (Agr. 104b) -----	3
Contracts and Specifications (Eng. 219) -----	2
Refrigeration (Eng. 336) -----	2
Machine Design (Eng. 607) -----	1
Machine Design (Eng. 608) -----	6
Mech. Eng. Lab'y (Eng. 383) -----	4
Thesis (Eng. 384) -----	4
Military Science (Ac. 605) -----	1
(a) Course 113 in civil engineering may be substituted.	

MINING ENGINEERING

Surveying (Eng. 105):

Forty-eight hours per week for four weeks immediately after commencement in summer camp.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
R. R. Surveying (Eng. 104) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Mechanic Arts (Eng. 361) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Mechanic Arts (Eng. 362) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

H. Wk.

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Mine Surveying (Eng. 401)	5
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mineralogy Laboratory (Eng. 431)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Applied Mechanics (Eng. 312)	3
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mining Engineering (Eng. 402)	5
Mineralogy Laboratory (Eng. 432)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Applied Mechanics (Eng. 312)	3
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mining Engineering (Eng. 402)	5

H. Wk.

Mineralogy Laboratory (Eng.

433)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Summer course, Engineering 404. Taken immediately after commencement.

SENIOR CLASS.

First Term.

English (Ac. 108)	2
Physics (Ac. 505)	2
Economic Geology (Eng. 442)	2
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104)	3
Drawing (Eng. 412)	3
Military Science (Ac. 603)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3

Second Term.

Economics (Ac. 2)	2
Physics (Ac. 505)	2
Hydraulics (Eng. 110)	5
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104)	3
Drawing (Eng. 412)	3
Military Science (Ac. 604)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Economic Geology (Eng. 443)	2
Mining Engineering (Eng. 411)	3
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104b)	3
Drawing (Eng. 412)	3
Military Science (Ac. 605)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3
*Electrical laboratory may be substituted.	

ARCHITECTURE.

SOPHOMORE CLASS.

First Term.

	H. Wk.
Architectural Drawing (Eng. 501) -----	6
Freehand Drawing (Eng. 511) -----	2
Building Construction (Eng. 521) -----	4
Descriptive Geometry (Eng. 602) -----	4
Mathematics (Ac. 403) -----	5
English (Ac. 103a) -----	3
Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

Architectural Drawing (Eng. 501) -----	6
Freehand Drawing (Eng. 511) -----	2
Building Construction (Eng. 521) -----	4
Descriptive Geometry (Eng. 602) -----	4
Mathematics (Ac. 403) -----	5
English (Ac. 103c) -----	3
Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Third Term.

Architectural Drawing (Eng. 501) -----	6
Freehand Drawing (Eng. 511) -----	2
Building Construction (Eng. 521) -----	4
Perspective (Eng. 542) -----	4
Descriptive Geometry (Eng. 602) -----	4
Mathematics (Ac. 404) -----	5
English (Ac. 103c) -----	3
Physics (Ac. 504) -----	3
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

First Term.

	H. Wk.
Architectural Drawing and Design (Eng. 502) -----	10
Building Cons. (Eng. 522) -----	7
Freehand Drawing (Eng. 512) -----	4
History of Architecture (Eng. 532) -----	4
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
French (Ac. 301a) -----	4
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

Architectural Drawing and Design (Eng. 502) -----	10
Building Cons. (Eng. 522) -----	7
Freehand Drawing (Eng. 522) -----	4
History of Architecture (Eng. 532) -----	4
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
French (Ac. 301b) -----	3
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

Architectural Drawing and Design (Eng. 502) -----	10
Building Cons. (Eng. 522) -----	7
Freehand Drawing (Eng. 512) -----	4
History of Architecture (Eng. 532) -----	4
Mathematics (Ac. 405) -----	5
Physics (Ac. 504) -----	3
French (Ac. 301c) -----	4
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

First Term.

Architectural Drawing and Design (Eng. 503) -----	14
Freehand Drawing (Eng. 512) -----	4
History of Architecture (Eng. 532) -----	4
French (Ac. 302a) -----	4
Theory of Structures (Eng. 113) -----	5
Structural Design (Eng. 114a) -----	2
English (Ac. 108) -----	2
Physics (Ac. 505) -----	2
Military Science (Ac. 603) -----	1

Second Term

Third Term.

H. Wk.

Architectural Drawing and Design (Eng. 503)	14
Freehand Drawing (Eng. 513)	4
History of Architecture (Eng. 533)	4
French (Ac. 302b)	3
Concrete and Masonry Construction (Eng. 118)	3
Structural Design (Eng. 114a)	2
Economics (Ac. 2)	2
Physics (Ac. 505)	2
Military Science (Ac. 604)	1

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Desc. Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Applied Mechanics (Eng. 312)	3
Mechanic Arts (Eng. 362)	5
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Chemical Lab'y (Org. Agr. 110f)	4
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Chemical Lab'y (Org. Agr. 110f)	4
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Physics (Ac. 504)	3
Organic Chemistry (Agr. 103a)	2
Industrial Chem. (Agr. 102a)	4
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Chemical Lab'y (Org. Agr. 110f)	4
Military Drill (Ac. 600)	3

Third Term.

Architectural Drawing and Design (Eng. 503a)	14
Freehand Drawing (Eng. 513)	4
History of Architecture (Eng. 533)	4
French (Ac. 302c)	4
Masonry and Foundations (Eng. 118)	3
Structural Design (Eng. 114a)	4
Economics (Ac. 2)	2
Military Science (Ac. 605)	1

CHEMICAL ENGINEERING.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Applied Mech. (Eng. 312)	3
Mechanic Arts (Eng. 362)	4
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

SENIOR CLASS.

First Term.

	H. Wk.
English (Ac. 108) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Economic Geology (Eng. 442) -----	2
Metallurgy (Agr. 104) -----	3
Theoretical Chem. (Agr. 107) -----	2
Electrical Eng. (Eng. 204) -----	2
Military Science (Ac. 603) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Mineralogy Lab'y (Eng. 431) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

Second Term.

Economics (Ac. 2) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Metallurgy (Agr. 104) -----	3
Electrical Eng. (Eng. 204) -----	2
Gas Engines (Eng. 335) -----	2
Engineering Chem. (Agr. 106) -----	2
Military Science (Ac. 604) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Mineralogy Lab'y (Eng. 432) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

Third Term.

Economics (Ac. 2) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Economic Geology (Eng. 443) -----	2
Metallurgy (Agr. 104b) -----	3
Electrical Eng. (Eng. 204a) -----	2
Engineering Chem. (Agr. 106) -----	2
Military Science (Ac. 605) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Mineralogy Lab'y (Eng. 433) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

CHEMISTRY AND
METALLURGY.

SOPHOMORE CLASS.

Students in the sophomore class in this course may take either the course prescribed for sophomore students in chemical engineering or that prescribed for students pursuing the General Course.

JUNIOR CLASS.

First Term.

	H. Wk.
English (Ac. 107) -----	3
Bacteriology (Vet. 108) -----	6
Physics (Ac. 504) -----	3
Organic Chemistry (Agr. 103a) -----	3
Industrial Chem. (Agr. 102a) -----	3
Geology (Eng. 435) -----	2
Military Science (Ac. 601) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
Bacteriology and Bact. Lab'y (Vet. 108) -----	6
Physics (Ac. 504) -----	3
Organic Chem. (Agr. 103a) -----	3
Industrial Chem. (Agr. 102a) -----	3
Geology (Eng. 435) -----	2
Military Science (Ac. 601) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) -----	3
Physics (Ac. 504) -----	3
Organic Chem (Agr. 103a) -----	2
Industrial Chem. (Agr. 102a) -----	4
Geology (Eng. 435) -----	2
Military Science (Ac. 602) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Chemical Lab'y (Org. Agr. 110f) -----	6
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

First Term.

English (Ac. 108) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Economic Geology (Eng. 442) -----	2
Metallurgy (Agr. 104) -----	3
Theoretical Chem. (Agr. 107) -----	2
Advanced Inorganic Chem. (Agr. 111) -----	2
Military Science (Ac. 603) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Mineralogy (Lab'y (Eng. 401) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

Second Term.

	H. Wk.
Economics (Ac. 2) -----	2
Physical Chemistry (Agr. 108) -----	2
German or French -----	3
Metallurgy (Agr. 104) -----	3
Advanced Inorganic Chemistry (Agr. 111) -----	2
Engineering Chem. (Agr. 106) -----	2
Military Science (Ac. 604) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Mineralogy Lab'y (Eng. 401) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

Third Term.

Economics (Ac. 2) -----	2
Physical Chemistry (Agr. 108) -----	2
German or French -----	3
Economic Geology (Eng. 443) -----	2
Metallurgy (Agr. 104b) -----	3
Advanced Inorganic Chemistry (Agr. 111) -----	2
Engineering Chem. (Agr. 106) -----	2
Military Science (Ac. 605) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Mineralogy Lab'y (Eng. 401) -----	4
Metallurgical Lab'y (Eng. 412) -----	3

TWO YEAR COURSE IN
MECHANIC ARTS.

FIRST YEAR.

First Term.

English (special course) -----	5
History (special course) -----	2
Mathematics (special course) -----	10
Drawing (Eng. 601) -----	5
Shop Work (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (special course) -----	5
History (special course) -----	2
Mathematics (special course) -----	10
Drawing (Eng. 601) -----	5
Shop Work (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (special course) -----	5
History (special course) -----	2
Mathematics (special course) -----	10
Drawing (Eng. 601) -----	5
Shop Work (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SECOND YEAR.

First Term.

	H. Wk.
English (special course) -----	3
Mathematics (special course) -----	5
Chemistry (Agr. 101) -----	4
Engines and Boilers (Eng. 3S1) -----	3
Shop Work (Eng. 361, 371) -----	12
Military Drill (Ac. 600) -----	3

Second Term.

Mechanics (Eng. 312) -----	3
English (special course) -----	3
Mathematics (special course) -----	5
Chemistry (Agr. 101) -----	4
Shop Work (Eng. 362, 371) -----	12
Military Drill (Ac. 600) -----	3

Third Term.

Mechanics (Eng. 312) -----	3
English (special course) -----	3
Mathematics (special course) -----	5
Chemistry (Agr. 101) -----	4
Shop Work (Eng. 362, 371) -----	13
Military Drill (Ac. 600) -----	3

TWO YEAR COURSE IN
APPLIED ELECTRICITY.

FIRST YEAR.

First Term.

English (special course) -----	5
Mathematics (special course) -----	5
Electrical Eng. (Eng. 204) -----	3
Engines and Boilers (Eng. 3S1) -----	3
Drawing (Eng. 601) -----	5
Electrical Lab'y (Eng. 206) -----	4
Shop Work (Eng. 361) -----	4
Power Plant (Eng. 220) -----	4

Second Term.

English (special course) -----	5
Mathematics (special course) -----	5
Electrical Eng. (Eng. 204) -----	3
Gas Engines (Eng. 3S2) -----	3
Drawing (Eng. 601) -----	5
Shop Work (Eng. 362) -----	4
Power Plant (Eng. 220) -----	4

Third Term.

English (special course) -----	5
Mathematics (special course) -----	5
Electrical Eng. (Eng. 205) -----	3
Trans. Power (Eng. 3S3) -----	3
Drawing (Eng. 601) -----	5

	H. Wk.
Electrical Lab'y (Eng. 208) ..	4
Shop Work (Eng. 362)	4
Power Plant (Eng. 220)	4

SECOND YEAR.

First Term.

English (special course)	3
Mathematics (Ac. 401)	5
Electrical Eng. (Eng. 217)	4
Kinematics (Eng. 604)	3
Practical Mech. (Eng. 321) ..	1
Drawing (Eng. 606)	4
Electrical Lab'y (Eng. 218) ..	4
Shop Work (Eng. 362)	4
Power House (Eng. 220)	4

Second Term.

English (special course)	3
Electrical Eng. (Eng. 217a) ..	4
Applied Mechanics (Eng. 312) ..	3
Practical Mechanics (Eng. 321) ..	1
Drawing (Eng. 606)	4
Electrical Lab'y (Eng. 218a) ..	4
Shop Work (Eng. 374)	4
Power House (Eng. 220)	4

Third Term.

English (special course)	3
Street Railways (Eng. 214) ..	2
Electrical Eng. (Eng. 217b) ..	4
Applied Mechanics (Eng. 312) ..	3
Practical Mechanics (Eng. 321) ..	1
Drawing (Eng. 606)	4
Electrical Lab'y (Eng. 218b) ..	4
Shop Work (Eng. 374)	4
Power House (Eng. 220)	4

SPECIAL COURSE FOR ROAD
FOREMEN AND INSPECTORS.*First Term.*

Mathematics (special course) ..	5
Drawing (Eng. 601)	5
Surveying (Eng. 102)	5
Roads and Pavements (Eng. 107)	5
Mechanic Arts (Eng. 351 or 361)	6

Second Term.

Mathematics (special course) ..	5
Drawing (Eng. 601)	5
Surveying (Eng. 102)	5
Roads and Pavements (special course)	3

	H. Wk.
Road Materials Lab'y (Eng. 108)	3
Mechanic Arts (Eng. 352 or 362)	6

Third Term.

Mathematics (special course) ..	5
Drawing (Eng. 601)	5
Surveying (Eng. 102)	5
Roads and Pavements (special course)	3
Road and Street Improve- ments (Eng. 109)	3

SPECIAL ONE-YEAR COURSE
IN WIRELESS TELEGRAPHY.*First Term.*

English (special course)	5
Mathematics (special course) ..	5
Electrical Eng. (Eng. 204)	3
Engines and Boilers (Eng. 3S1)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 206) ..	4
Shop Work (Eng. 361)	4
Wireless Telegraphy (Eng. 221)	4

Second Term.

English (special course)	5
Mathematics (special course) ..	5
Electrical Eng. (Eng. 204)	3
Gas Engines (Eng. 3S2)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 207) ..	4
Shop Work (Eng. 362)	4
Wireless Telegraphy (Eng. 221)	4

Third Term.

English (special course)	5
Mathematics (special course) ..	5
Electrical Eng. (Eng. 205)	3
Trans. Power (Eng. 3S3)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 208) ..	4
Shop Work (Eng. 362)	4
Wireless Telegraphy (Eng. 221)	4

TWO-YEAR MINING COURSE.

FIRST YEAR.

First Term.

English (special course)	5
Mathematics (Ac. 401)	5

	H. Wk.
Mining (Eng. 401) -----	5
Mineralogy (Eng. 431) -----	4
Drawing (Eng. 601) -----	5
Military Drill (Ac. 600) -----	3

Second Term.

English (special course) -----	5
Mathematics (Ac. 402) -----	5
Mining (Eng. 402) -----	5
Surveying (Eng. 102) -----	5
Mineralogy (Eng. 432) -----	4
Drawing (Eng. 601) -----	5
Military Drill (Ac. 600) -----	3

Third Term.

English (special course) -----	5
Mathematics (Ac. 402) -----	5
Mining (Eng. 402) -----	5
Surveying (Eng. 103) -----	5
Mineralogy (Eng. 433) -----	4
Drawing (Eng. 601) -----	5
Military Drill (Ac. 600) -----	3

SECOND YEAR.

First Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 204) -----	3
Surveying (Eng. 104) -----	5
Eng. Geology (Eng. 436) -----	2

	H. Wk.
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 361) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

Second Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 204) -----	3
Applied Mech. (Eng. 312) -----	3
Eng. Geology (Eng. 436) -----	2
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 362) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

Third Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 217b) -----	4
Applied Mech. (Eng. 312) -----	3
Eng. Geology (Eng. 436) -----	2
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 362) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

COLLEGE OF AGRICULTURAL SCIENCES.

AGRICULTURE.

FRESHMAN CLASS.

First Term.

English (Ac. 102a, c) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 401) -----	5
Agriculture (Agr. 201, 801) -----	2
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102a,b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Corn (Agr. 202) -----	4
Zoology (Agr. 701) -----	5
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Organic Chemistry (Agr. 103b) -----	3
Stock Judging (Agr. 802) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

	H. Wk.
<i>Second Term.</i>	
English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Zoology (Agr. 701) -----	5
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Stock Judging (Agr. 803) ---	4
Farm Accounts (Agr. 203) ---	2
Organic Chemistry (Agr. 103b)	3
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3

<i>Third Term.</i>	
English (Ac. 103c) -----	3
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Horticulture (Agr. 601) -----	6
Agriculture (Agr. 203) -----	4
Agricultural Chem. (Agr. 105)	4
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

<i>First Term.</i>	
English (a) (Ac. 107) -----	3
Physics (Ac. 504) -----	3
Dairying (Agr. 804) -----	4
Agr. Bacteriology (Agr. 303) --	6
*Veterinary Science (a) (Vet. 102) -----	5
Agriculture (Agr. 220) -----	4
Horticulture (Agr. 602) -----	2
Chemical Lab'y (a) (Agr. 110b)	6
Military Tactics (Ac. 601) ---	1
Military Drill (Ac. 600) -----	3

<i>Second Term.</i>	
English (a) (Ac. 107) -----	3
Physics (Ac. 504) -----	3
Botany (Agr. 304) -----	6
*Veterinary Science (a) (Vet. 102) -----	5
An. Husbandry (Agr. 805) -----	4
Horticulture (Agr. 603, 604) --	6
Geology (Eng. 434) -----	4
Chemical Lab'y (a) (Agr. 110b)	6
Military Tactics (Ac. 601) ---	1
Military Drill (Ac. 600) -----	3

<i>Third Term.</i>	
English (a) (Ac. 107) -----	3
Physics (Ac. 504) -----	3
Botany (Agr. 304) -----	6
*Veterinary Science (a) (Vet. 102) -----	5
Animal Husbandry (Agr. 806)	4
Agriculture (Agr. 205) -----	4

Horticulture (Agr. 603) -----	4
Chemical Lab'y (a) (Agr. 110b)	6
Military Tactics (Ac. 602) ---	1
Military Drill (Ac. 600) -----	3
(a) Education may be substituted.	

*Required of students who specialize in animal husbandry.

SENIOR CLASS.

The studies of the course in Agriculture are divided into five groups, as follows:

Group "A," agronomy: Gives special prominence to crops, soils, and farm machinery.

Group "B," horticulture: Gives special reference to fruit growing, trucking, greenhouse management, and landscape gardening.

Group "C," animal husbandry: Gives special prominence to all work pertaining to live stock.

Group "D," agricultural chemistry: Especially designed to prepare students for experiment station and fertilizer control work.

Group "E," botany: Designed to train students for station work or to pursue advanced work in botany.

The elective work in each group must be approved at the beginning of the senior year by the president and the professor in charge, and with the required work must aggregate at least twenty-one hours, counting two hours laboratory equal to one hour. At least nineteen hours of this work must be taken in each term; and the maximum for any term is a total of twenty-five such hours in all classes, except by special permission of the faculty.

The giving of an elective course will be optional with the professor in charge unless it be elected by at least four students.

GROUP "A," AGRONOMY.

First Term.

	H. Wk.
Agr. and Agr. Lab. (Agr. 206)	4
Entomology (Agr. 702, 703)	5
Military Science (Ac. 603)	1
German (a) (Ac. 305a)	4
Thesis (Agr. 209)	2

Second Term.

Agriculture (Agr. 207)	2
Farm Machinery (Agr. 222)	2
Forestry (Agr. 608)	5
Military Science (Ac. 604)	1
German (a) (Ac. 305b)	3
Thesis (Agr. 209)	2

Third Term.

Agr. and Agr. Lab. (Agr. 208)	4
Entomology (Agr. 704, 705)	5
Military Science (Ac. 605)	1
German (a) (Ac. 305c)	4
Thesis (Agr. 209)	2

(a) French may be substituted.

Electives: The additional work is to be selected from the following subjects:

ELECTIVES FOR SENIOR GROUPS.

First Term.

Soils and Soils Lab. (Agr. 211)	5
Cotton (Agr. 206)	4
Animal Husbandry (Agr. 807, 808)	6
Horticulture (Agr. 605)	5
Canning (Agr. 606)	3
Botany (Agr. 305)	6
Vet Science (Vet. 102)	5
Industrial Chem. (Agr. 102a)	3
French (Ac. 302a)	4
Physics (Ac. 505)	2
Chemical Lab'y (Agr. 110b)	6
Mathematics (Ac. 403 & 404, or 405)	5
Education	3

Second Term.

Soils and Soils Lab. (Agr. 211)	5
Agriculture (Agr. 207)	4
Animal Husbandry (Agr. 808, 809, 811, 813)	6
Horticulture (Agr. 605, 606)	5
Botany (Agr. 305)	6

H. Wk.

Botany (Agr. 306)	6
Vet. Science (Vet. 102)	5
Industrial Chem. (Agr. 102a)	3
French (Ac. 302b)	3
Chemical Lab'y (Agr. 110b)	6
Mathematics (Ac. 403 & 404, or 405)	5
Forestry (Agr. 608)	5
Education	3

Third Term.

Soils and Soils Lab. (Agr. 211)	5
Agriculture (Agr. 208)	4
Animal Husbandry (Agr. 810, 818)	4
Horticulture (Agr. 605, 609)	7
Botany (Agr. 307)	6
Vet. Science (Vet. 102)	5
Industrial Chem. (Agr. 102a)	3
French (Ac. 302c)	4
Chemical Lab'y (Agr. 110)	6
Mathematics (Ac. 403 & 404, or 405)	5
Education	3

GROUP "B," HORTICULTURE.

First Term.

Horticulture (Agr. 605, 606)	8
Entomology (Agr. 702, 703)	5
Military Science (Ac. 603)	1
Soils (Agr. 211)	5
German (a) (Ac. 306a)	3
Thesis (Agr. 611)	

Second Term.

Horticulture (Agr. 605, 607)	6
Forestry (Agr. 608)	4
Military Science (Ac. 604)	1
Soils (Agr. 211)	5
German (a) (Ac. 306b)	4
Thesis (Agr. 610)	

Third Term.

Horticulture (Agr. 605, 609)	7
Entomology (Agr. 704, 705)	5
Military Science (Ac. 605)	1
Soils (Agr. 211)	5
German (a) (Ac. 306c.)	4
Thesis (Agr. 610)	

(a) French or English and Political Economy and one additional subject may be substituted.

Electives: The additional work is to be selected from the elective subjects listed above.

GROUP "C," ANIMAL HUSBANDRY.

Animal Hus. (Agr. 807, 808, 812) -----	7
Animal Hus. Lab'y (Agr. 812) -----	2
Entomology (Agr. 702, 703) -----	5
Military Science (Ac. 603) -----	1
German (a) (Ac. 306a) -----	4
Thesis -----	

Second Term.

Animal Hus. (Agr. 808, 812, 813) -----	6
Animal Hus. Lab'y (Agr. 809, 811, 812) -----	6
Military Science (Ac. 604) -----	1
German (a) (Ac. 306b) -----	3
Thesis -----	

Third Term.

Animal Hus. (Agr. 808, 810, 812) -----	6
Animal Hus. Lab'y (Agr. 812) -----	2
Entomology (Agr. 704, 705) -----	5
Military Science (Ac. 605) -----	1
German (a) (Ac. 306c) -----	4
Thesis -----	

(a) French may be substituted.

Electives: The additional work is to be selected from the elective subjects listed on page 85 or the third year course in Veterinary Medicine.

GROUP "D," AGRICULTURAL CHEMISTRY.

First Term.

Chemical Lab'y (Agr. 110) -----	6
Entomology (Agr. 702, 703) -----	5
Military Science (Ac. 603) -----	1
German (a) (Ac. 306a) -----	4

Second Term.

Chemical Lab'y (Agr. 110) -----	6
Forestry (Agr. 608) -----	5
Military Science (Ac. 604) -----	1
German (a) (Ac. 306b) -----	3

Third Term.

Chemical Lab'y (Agr. 110) -----	6
Entomology (Agr. 704, 705) -----	5
Military Science (Ac. 605) -----	1
German (a) (Ac. 306c) -----	4

(a) French may be substituted.

Electives: The additional work

is to be selected from the elective subjects listed on page 85.

GROUP "E," BOTANY.

First Term.

	H. Wk.
German (a) (Ac. 306a) -----	4
Botany (Agr. 305) -----	6
Soils and Soils Lab'y (Agr. 211) -----	5
Entomology (Agr. 702, 703) -----	5
Military Science (Ac. 603) -----	1

Second Term.

German (a) (Ac. 306b) -----	3
Botany (Agr. 305 or 306) -----	6
Soils and Soils Lab'y (Agr. 211) -----	5
Forestry and Forestry Lab'y (Agr. 609) -----	5
Military Science (Ac. 604) -----	1

Third Term.

German (a) (Ac. 306c) -----	4
Botany (Agr. 307) -----	6
Soils and Soils Lab'y (Agr. 211) -----	5
Entomology (Agr. 704, 705) -----	5
Military Science (Ac. 605) -----	1

(a) French may be substituted.

Electives: The equivalent of at least six hours from the subjects listed on page 85, subject to the direction of the professor.

TWO-YEAR COURSE IN AGRICULTURE.

FIRST YEAR.

First Term.

Corn (Agr. 204) -----	4
Dairying (Agr. 815) -----	6
Veterinary Science (Vet. 102) -----	5
Horticulture (Agr. 601) -----	4
Chemistry (Agr. 101) -----	4
English (special course) -----	3
Physiology (Vet. 101) -----	2
Feeding (Agr. 816) -----	2
Shop Work -----	6
Military Drill (a) (Ac. 600) -----	3

Second Term.

Veterinary Science (Vet. 102) -----	5
Chemistry (Agr. 101) -----	4
English (special course) -----	3
Physiology (Vet. 101) -----	2
Livestock Management (Agr. 817) -----	3

	H. Wk.
Veg. Gardening (Agr. 603) -----	4
Feeding (Agr. 816) -----	2
Judging Livestock (Agr. 818) -----	4
Shop Work -----	6
Military Drill (a) (Ac. 600) -----	3

Third Term.

Veterinary Science (Vet. 102) -----	5
Chemistry (Agr. 101) -----	4
English (special course) -----	3
Physiology (Vet. 101) -----	2
Livestock Management (Agr. 817) -----	3
Judging Livestock (Agr. 819) -----	2
Livestock Feeding (Agr. 816) -----	2
Agriculture (Agr. 203) -----	4
Veg. Gardening (Agr. 603) -----	4
Shop Work -----	6
Military Drill (Ac. 600) -----	3

SECOND YEAR.

First Term.

Poultry (Agr. 822) -----	2
Zoology (Agr. 701) -----	5
Insects (Agr. 702, 703) -----	5
Soils and Fertilizers (Agr. 213) -----	2
Horticulture (Agr. 605) -----	5
Livestock Judging (Agr. 820) -----	4
Canning (Agr. 606) -----	3
Agriculture (Agr. 206) -----	4

Second Term.

Agriculture (Agr. 212) -----	4
Zoology (Agr. 701) -----	5
Swine Judging (Agr. 822) -----	4
Soils and Fertilizers (Agr. 213) -----	2
Meats (Agr. 823) -----	4
Terracing and Drainage (Agr. 214) -----	2
Horticulture (Agr. 605) -----	3
Forestry (Agr. 608) -----	5

Third Term.

Agriculture (Agr. 208) -----	8
Insects (Agr. 704, 705) -----	5
Horticulture (Agr. 605) -----	5
Principles of Breeding (Agr. 824) -----	2
Sheep Judging (Agr. 825) -----	2

PHARMACY.

FRESHMAN CLASS.

First Term.

English (102a) -----	3
History (Ac. 201) -----	2

	H. Wk.
Latin (Ac. 209) -----	3
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Agriculture (Agr. 201, 801) -----	2
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) -----	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 205) -----	3
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
†Mathematics (Ac. 403) -----	5
Botany (Agr. 302) -----	6
English (Ac. 103a) -----	3
Physiology (Vet. 101) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
English (Ac. 103c) -----	3
†Mathematics (Ac. 403) -----	5
Botany (Agr. 302) -----	6
Physiology (Vet. 101) -----	2
Chemical Lab'y (Ac. 110a) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

Physics (Ac. 504) -----	3
English (Ac. 103c) -----	3
†Mathematics (Ac. 404) -----	5
Botany (Agr. 307) -----	6
Physiology (Vet. 101) -----	2

	H. Wk.
Chemical Lab'y (Agr. 110a) ..	6
Military Drill (Ac. 600)	3
†With approval of faculty other work may be substituted.	

JUNIOR CLASS.

First Term.

English (a) (Ac. 107)	3
Physics (Ac. 504)	3
Pharmacy (Agr. 401a)	3
Pharmacognosy (Agr. 402) ..	4
Chemical Lab'y (Agr. 110b) ..	6
Military Tactics (Ac. 601) ..	1
Military Drill (Ac. 600)	3

Second Term.

English (a) (Ac. 107)	3
Physics (Ac. 504)	3
†Pharmacy (Agr. 401a)	3
Pharmaceutical Laboratory (Agr. 401b)	8
Pharmacognosy (Agr. 402) ..	4
Chemical Lab'y (Agr. 110b) ..	6
Military Tactics (Ac. 601) ..	1
Military Drill (Ac. 600)	3

Third Term.

English (a) (Ac. 107)	3
Physics (Ac. 504)	3
Pharmaceutical Laboratory (Agr. 401b)	8
Phar Chem. (Agr. 406)	3
Pharmacognosy (Agr. 402) ..	4
Chemical Lab'y (Agr. 110b) ..	6
Military Tactics (Ac. 602) ..	1
Military Drill (Ac. 600)	3
(a) French or German may be substituted.	
†Substitute Phar. Chem. (Agr. 406) latter half term.	

SENIOR CLASS.

First Term.

Bacteriology and Bact. Lab'y (Agr. 108)	6
Organic Chem. (Agr. 103a) ..	2
Pharmacy (Agr. 403a)	3
Adv. Pharmacog. (Agr. 404) ..	3
Military Science (Ac. 603) ..	1
Chemical Lab'y (Agr. 110c) ..	6
Pharmaceutical Laboratory (Agr. 403b)	12

Second Term.

Bacteriology and Bact. Lab'y (Agr. 108)	6
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	H. Wk.
United States Phar. (Agr. 407) 3	
†Pharmacology (Agr. 120)	3
Organic Chem. (Agr. 103a) ..	2
Pharmacy (Agr. 403a)	3
Prescriptions (Agr. 405)	3
Military Science (Ac. 604) ..	1
Chemical Lab'y (Agr. 110c) ..	6
Pharmaceutical Testing and Drug Assay (Agr. 403c) ..	9

Third Term.

United States Phar. (Agr. 407) 3	
Pharmacology (Agr. 120)	3
Organic Chem. (Agr. 103a) ..	2
Pharmacy (Agr. 403a)	3
Prescriptions (Agr. 405)	3
Military Science (Ac. 605) ..	1
Toxicology (Agr. 110e)	6
Urinalysis (Agr. 117)	3
Prescription Laboratory (Agr. 403d)	6
F od and Drug Analysis (Agr. 403e)	6
†Substitute for Bacteriology in latter half term.	

TWO-YEAR COURSE IN
PHARMACY.

FIRST YEAR.

First Term.

English (a) (special course) ..	3
Chemistry (Agr. 101)	4
Physiology (Agr. 101)	2
Pharmacy (Agr. 401a)	3
Botany (Agr. 302)	6
Pharmacognosy (Agr. 402) ..	4
Chemical Lab'y (Agr. 110a) ..	6
Military Drill (Ac. 600)	3

Second Term.

English (a) (special course) ..	3
Chemistry (Agr. 101)	4
Physiology (Agr. 101)	2
†Pharmacy (Agr. 401a)	3
Pharmacognosy (Agr. 402) ..	4
Botany (Agr. 302)	6
Chemical Lab'y (Agr. 110a) ..	6
Pharmaceutical Laboratory (Agr. 401b)	8
Military Drill (Ac. 600)	3

Third Term.

English (special course)	3
Botany (Agr. 307)	6
Chemistry (Agr. 101)	4

	H. Wk.
Phar. Chem. (Agr. 406) -----	3
Physiology (Vet. 101) -----	2
Pharmacognosy (Agr. 402) -----	4
Chemical Lab'y (Agr. 110a) -----	6
Pharmaceutical Laboratory (Agr. 401b) -----	8
Military Drill (Ac. 600) -----	3

(a) Latin may be substituted.
 †Substitute Phar. Chem. (Agr. 406) latter half term.

SECOND YEAR.

First Term.

Pharmacy (Agr. 403a) -----	3
Adv. Pharmacog. (Agr. 404) -----	3
Pharmaceutical Laboratory (Agr. 403b) -----	12
Organic Chem. (Agr. 103a) -----	2
Chemical Lab'y (Agr. 110c) -----	6
Bacteriology (Vet. 108) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Pharmacy (Agr. 403a) -----	3
Prescriptions (Agr. 405) -----	3
Pharmaceutical Testing and Drug Assay (Agr. 403c) -----	9
Organic Chem. (Agr. 103a) -----	2
Chemical Lab'y (Agr. 110c) -----	6
Bacteriology (Vet. 108) -----	6
United States Phar. (Agr. 407) -----	3

	H. Wk.
†Pharmacology (Vet. 120) -----	3
Military Drill (Ac. 600) -----	3

Third Term.

Pharmacy (Agr. 403a) -----	3
Prescriptions (Agr. 405) -----	3
United States Phar. (Agr. 407) -----	3
Pharmacology (Vet. 120) -----	3
Prescription Laboratory (Agr. 403d) -----	6
Food and Drug Analysis (403e) -----	6
Organic Chem. (Agr. 103a) -----	2
Toxicology (Agr. 110e) -----	7
Military Drill (Ac. 600) -----	3
†Substitute for Bacteriology in latter half second term.	

THREE-YEAR COURSE IN PHARMACY.

In the first and second years
the same studies are prescribed
as in the Two-Year Course.

THIRD YEAR.

Entire Session.

Pharmaceutical Chemistry and Lab'y (Agr. 408) -----	15
Chemistry and Chem. Lab'y (Agr. 408j) -----	15
Bacteriological Laboratory (Vet. 108) -----	10
Military Drill (Ac. 600) -----	1

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

VETERINARY MEDICINE.

FIRST YEAR.

First Term.

	H. Wk.
General Chem. (Agr. 101) -----	4
Physiology (Vet. 101) -----	2
English (Ac. 102a) -----	3
Anatomy and Anat. Lab'y (Vet. 119) -----	12
Histology (Vet. 104) -----	5
Livestock Feeding (Agr. 816) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Vet. Science (Vet. 102) -----	2
Clinics (Vet. 122) -----	3
Military Drill (Ac. 600) -----	3

Second Term.

General Chem. (Agr. 101) -----	4
Physiology (Vet. 101) -----	2

	H. Wk.
English (Ac. 102b) -----	3
Anatomy and Anat. Lab'y (Vet. 119) -----	15
Histology (Vet. 104) -----	5
Stock Feeding (Agr. 816) -----	2
Live Stock Management (Agr. 817) -----	2
Chemical Lab'y (Agr. 110b) -----	6
Vet. Science (Vet. 102) -----	2
Clinics (Vet. 122) -----	3
Military Drill (Ac. 600) -----	3

Third Term.

General Chem. (Agr. 101) -----	4
Physiology (Vet. 101) -----	2
English (Ac. 102b) -----	3
Live Stock Management (Agr. 817) -----	2

	H. Wk.
Anatomy and Anat. Lab'y (Vet. 119) -----	14
Embryology (Vet. 105) -----	5
Chemical Lab'y (Agr. 110b) -----	6
Vet. Science (Vet. 102) -----	2
Clinics (Vet. 122) -----	3
Military Drill (Ac. 600) -----	3

SECOND YEAR.

First Term.

Pharmacy (Agr. 403) -----	2
Pharmacy Lab'y (Agr. 403a) -----	8
Vet. Physiology (Vet. 106) -----	3
Bacteriology and Bact. Lab'y (Vet. 108) -----	6
Obstetrics (Vet. 110) -----	2
Vet. Medicine (Vet. 123) -----	3
Anatomy and Clinical Lab'y (Vet. 119, 122) -----	12
Vet. Science (Vet. 102) -----	2
Clinics (Vet. 122) -----	5
Military Drill (Ac. 600) -----	3

Second Term.

Pharmacy (Agr. 403) -----	5
Pharmacy Lab'y (Agr. 403a) -----	5
Vet. Physiology (Vet. 106) -----	2
Bacteriology, Pathology and Lab'y (Vet. 108, 109) -----	6
Obstetrics and Surgery Vet. 110, 111) -----	3
Vet. Medicine (Vet. 123) -----	3

Third Term.

Anatomy and Clinical Lab'y (Vet. 119, 122) -----	12
Military Drill (Ac. 600) -----	3
Botany (Agr. 307) -----	6
Vet. Physiology (Vet. 106) -----	2
Therapeutics (Vet. 120) -----	2

	H. Wk.
Surgery (Vet. 121) -----	3
Vet. Medicine (Vet. 123) -----	3
Pathology and Path. Lab'y (Vet. 109) -----	6
Anatomy and Clinic Lab'y (Vet. 119, 122) -----	12
Military Drill (Ac. 600) -----	3

THIRD YEAR.

First Term.

Stock Breeding (Agr. 807) -----	2
Therapeutics (Vet. 120) -----	3
Surgery (Vet. 121) -----	2
Vet. Medicine (Vet. 123) -----	3
Infectious Diseases (Vet. 113) -----	2
Meat Inspection (Vet. 115) -----	2
Anatomy and Clinic Lab'y (Vet. 119, 122) -----	12
Thesis -----	4

Second Term.

Dairying (Agr. 814) -----	3
Surgical Exercises (Vet. 112) -----	4
Therapeutics (Vet. 120) -----	3
Surgery (Vet. 121) -----	2
Vet. Medicine (Vet. 123) -----	3
Infectious Diseases (Vet. 113) -----	3
Meat Inspection (Vet. 115) -----	2
Animal Parasites (Vet. 114) -----	2
Clinic Laboratory (Vet. 122) -----	12
Thesis -----	4

Third Term.

Toxicology (Agr. 110e) -----	7
Urinalysis (Vet. 117) -----	3
Surgery (Vet. 121) -----	2
Vet. Medicine (Vet. 123) -----	3
Milk Inspection (Vet. 116) -----	3
Animal Parasites (Vet. 114) -----	2
Clinic Laboratory (Vet. 122) -----	12
Thesis -----	4

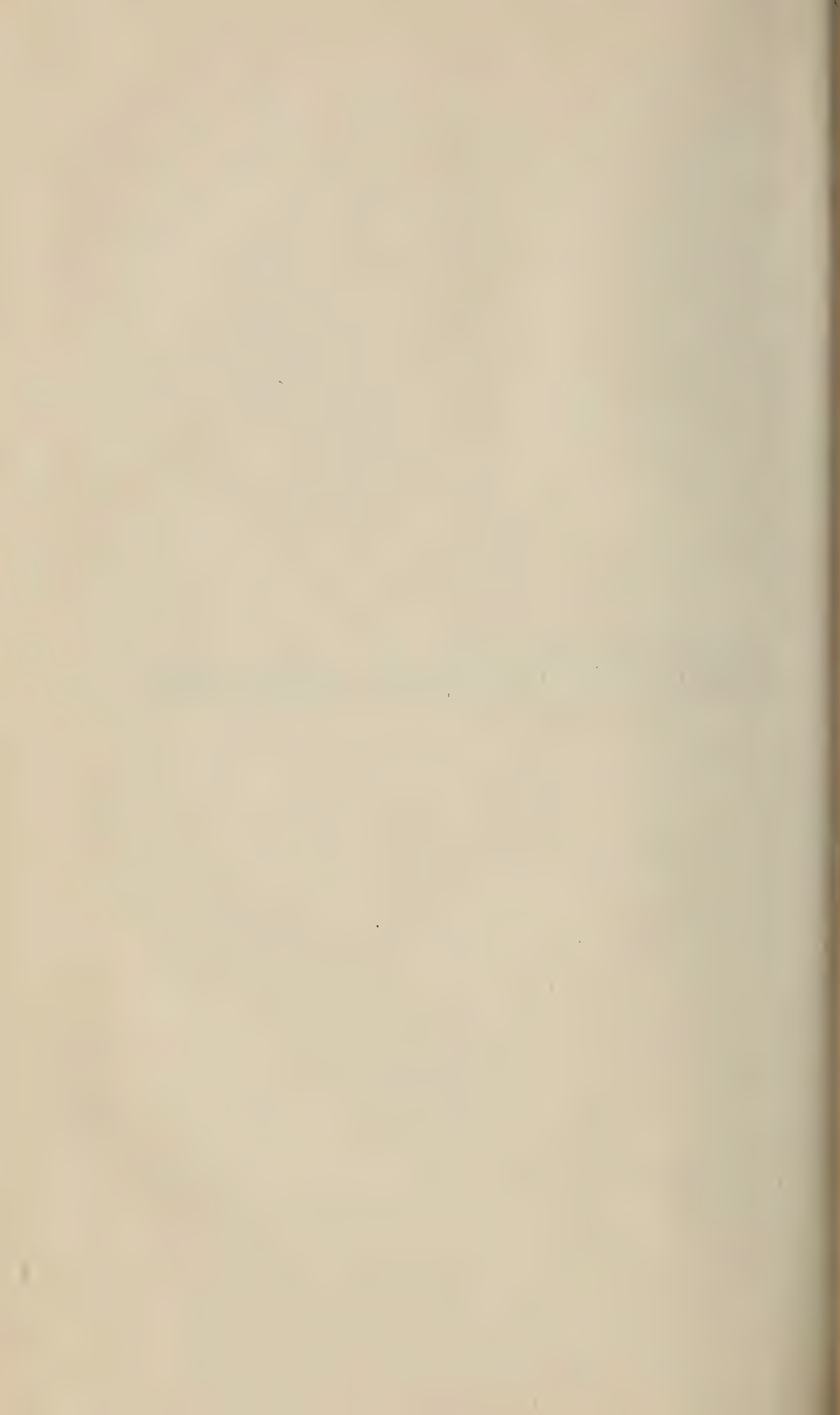
SCHEDULE OF EXERCISES

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY	SATURDAY.
First	1. An. Husb. (1,2) 1. Econom. Geol. (1,3) 1. An. Chem. (Min.) 1. Bacteriology 1. Drawing 1. Elec. Engineering 1. German 1. Vet. Medicine (1,2) 2. Arch. History 2. Bacteriology (1,2) 2. Drawing 2. Gen. Path. (2,3) 2. Mech. Eng. 2. Education 2. Pharmacy 2. Horticultural Lab'y 3. Agr. Chem. (3) 3. Zoology (1,2) 3. Surveying (1) 3. Latin 3. Mechs. for Engineers (2,3) 4. Mathematics	1. Elec. Eng 1. Infec. Dis. (1,2) 1. Drawing 1,2. Gen. Geology 2. Botany Lab. (Phar.) 2. Drawing 2. German 2. Str. Drafting (2) 2. Graphics 2. Machine Design 2. Mineralogy 2. Education 2. Obstetrics (1,2) 3. Agr. Chem. (3) 3. An. Industry (1) 3. Latin 3. Surveying (2,3) 4. Mathematics	1. An. Husb. (1,2) 1. Econom. Geol. (1,3) 1. Drawing 1. Elec. Eng. 1. German 1. Infec. Dis. (1,2) 1. Milk Inspec. (3) 2. Drawing 2. Mech. Eng. 2. Pharmacy 2. Graphics 2. Vet. Science 3. Agr. Chem. (3) 3. Zoology (1,2) 3. Surveying (1) 3. Ext. Anatomy 3. Latin 3. Mechs. for Engineers (2,3) 4. Mathematics	1. Drawing 1. Elec. E. g. 1. Therapeutics (1,2) 1,2. Gen. Geology 2. Botany Lab. (Phar.) 2. Drawing 2. German 2. Education 2. Mech. Eng. 2. Mineralogy 3. Histology 3. Latin 3. Qual. Chem. 4. Mathematics	1. Plant Path. (1,2) 1. Drawing 1. Elec. Eng. 1. German 1. Infec. Dis. (1,2) 1. Milk Inspec. (3) 1,2. Gen. Geology 2. Drawing 2. Machine Design 2. Pharmacy 2. Theory of Arch. 2. Vet. Science 3. Zoology (1,2) 3. Agr. Chem. (3) 3. Surveying 3. Exterior Anatomy 3. Mechs. for Engineers (2,3) 3. Latin 4. Mathematics	1. Soils (1,3) 3. Public Speaking Military Drill
Second—9-10	1. Bacteriology 1. Calculus 1. Horticulture 1. Elec. Eng. 1. Surgery (1,2) 2. Bacteriology (1,2) 2. Roads and Pavements (1) 2. Plant Physiology 2. Latin 2. Education 2. Mining Eng. 2. Gen. Path. (2,3) 2. Str. Drafting (2) 2. Graphic Statics (3) 3. English 4. Chemistry	1. Soils 1. French 1. Mech. Eng. 1. Metallurgy 2. Botany (Agr.) 2. Roads and Pavements (1) 2. Elec. Eng. 2. Mach. D'sign (M.E.) 2. Mining Eng. 2. Str. Drafting (2) 2. Graphic Statics (3) 3. Desc. Geom. 3. Histology 3. Physiology 4. History	1. Calculus 1. Pharmacognosy 1. Horticulture 1. Vet. Medicine 2. An. Industry (3) 2. Roads and Pavements (1) 2. Elec. Eng. 2. Horticulture (1,2) 2. Latin 2. Education 2. Mining Eng. 2. Surgery (3) 2. Str. Drafting (2) 2. Graphic Statics (3) 3. English 3. Histology 4. Chemistry	1. Soils 1. French 1. Machine Design 1. Mech. Eng. 1. Metallurgy 1. Vet. Medicine 1. Vet. Science 2. Arch. History 2. Botany (Agr.) 2. Elec. Eng. 2. Roads and Pavements (1) 2. Mining Eng. 2. Str. Drafting (2) 2. Graphic Statics (3) 3. Botany Lab. (Phar.) 3. Qual. Chem. 3. An. Ind. (1) 3. Histology 4. History	1. Calculus 1. Horticulture 1. Vet. Science 2. An. Ind. (3) 2. Roads and Pavements (1) 2. Education 2. Horticulture (1,2) 2. Latin 2. Spanish 2. Machine Design 2. Mining Eng. 2. Str. Drafting (2) 2. Vet. Medicine 3. English 4. Chemistry	1. Arch. Drawing 1. Eng. Chem. 1. Machine Design 1. Crops (1,3) 1. Farm Mach. (2) 2. Arch. Drawing 2. Pharmacy
Third—10-11	1. An. Husbandry 1. Arch. Eng. 1. Bacteriology 1. Civil Eng. 1. Latin 1. Therapeutics (2,3) 2. Bacteriology (1,2) 2. Gen. Path. (2,3) 2. Physics 3. Qual. Chem. 4. English	1. Civil Eng. 1. Elec. Eng. (Min. Mech.) 1. Entomology (1,3) 1. Forestry 1. Meat Inspection 1. Pharmacognosy 1. Telephone Eng. 2. Agr. Geology (1,2) 2. French 2. Mach. Design 2. Spec. and Bldg. Materials 3. An. Ind. 3. Agr. Chem. (3) 3. History 4. English	1. Arch. Eng. 1. An. Husb. 1. Civil Eng. 1. Eng. Contracts 1. Latin 1. Therapeutics (1,2) 2. Physics 1. Therapeutics (3) 3. Agriculture 4. English	1. Entomology (1,3) 1. Forestry (2) 1. Civil Eng. 1. Elec. Eng. (Min., Mech.) 1. Pharmacognosy 1. Telephone Eng. 1. Vet. Medicine 2. French 2. Practical Mech. 2. Agr. Geology (1,2) 2. Spec. and Bldg. Materials 3. Agr. Chem. (3) 3. History 3. Horticulture (3) 3. Histology 4. English	1. An. Husb. 1. Latin 1. Arch. Eng. 1. Civil Eng. 1. Pharmacognosy 2. Obstetrics (1,2) 2. Physics 2. Therapeutics (3) 3. Agriculture 4. English	1. Arch. Drawing 1. Machine Design 1. Farm Mach. (2) 1. Crops (1,3) 1,2,3. Clinics 2. Arch. Drawing 3. Surveying (1) 3. Phys. Lab. 4. Surveying (2,3) Chemical Lab. Field Work Mechanic Arts Elec. Lab.
Fourth—11-12	1. English (1) 1. Pol. Econ. (2,3) 2. Chem. Ind. and Org. 2. Horticulture (1,2) 2. Mathematics 2. Pharmacognosy 2. Vet. Medicine 3. Qual. Chem. 3. Arch. Drawing 4. Agriculture (1) 4. Latin (2,3) 4. Mechanic Arts 4. Surveying (2,3)	1. Live St. Man. 1. Plant Path. (1,2) 1. Bacteriology 1. Physics 1. Phys. Chemistry 2. Spanish 2. Agriculture (1,3) 2. An. Industry (2) 2. Chem. (Org.) 2. Mathematics 2. Pharmacognosy 3. An. Husb. (3) 3. Drawing (Arch.) 3. Surveying (2,3) 4. Latin	1. English (1) 1. Pol. Econ. (2,3) 1. Therapeutics (Phar.) (3) 2. Spanish 2. Chemistry (Ind.) 2. Chem. (Org.) (2) 2. Gen. Path. (2,3) 2. Horticulture (3) 2. Mathematics 2. Pharmacognosy 3. Horticulture (3) 4. Agriculture (3) 4. Surveying (2,3) 4. Mechanic Arts	1. Bacteriology 1. Physics 1. Phys. Chemistry 2. Agriculture (1,3) 2. An. Ind. (2) 2. Chemistry (Org.) 2. Mathematics 3. Botany (Vet.) 3. Desc. Geometry 3. Physiology 4. Latin	1. Military Science 2. Chemistry (Ind.) 2. Gen. Path. (2,3) 2. Horticulture (3) 2. Mathematics 2. Pharmacognosy 3. Botany 3. Drawing (Arch.) 4. Latin 4. Mechanic Arts 4. Agriculture 4. Surveying (2,3)	1. Plant Path. (1,2) 1. Machine Design 1. Pharmaceutical Lab. 1,2,3. Clinics 3. Mechanic Arts 3. Phys. Lab. 3. Surveying (1) 4. Surveying (2,3) 3. Bot. Lab. (Phar.) 4. Mechanic Arts Chemical Lab. Field Work
Fifth—12-1	1. Civil Eng. 1. Agriculture 1. Botany 1. Chemistry (Theo.) 1. Drawing (Arch.) 1. French 1. Meat Inspection 1. Mechanical Eng. 1. Mining Eng. 1. Pharmacy 2. Spanish 2. Vet. Physiology 2. English 3. An. Husb. (3) 3. Mathematics 3. Org. Chem. (1,2) 4. Drawing 4. Mechanic Arts	1. Agronomy 1. Geology 1. Mech. Eng. 1. Pharmacy 1. Therapeutics (1,2) 2. Arch. History 2. English 2. Spanish 2. Vet. Physiology 3. Mathematics 3. An. Husb. (3) 3. Org. Chem. (1,2) 4. Chemistry	1. Civil Eng. 1. Drawing (Arch.) 1. Entomology (1,3) 1. Forestry (2) 1. Mech. Eng. 1. Milk Inspec. (3) 1. Mining Eng. 1. Pharmacy 1. Spec. Path. (1,2) 2. Chem. (Analyt.) 2. German 2. Vet. Medicine 3. Botany 3. Mathematics 4. Drawing 4. Mechanic Arts	1. Soils 1. Geology 1. Mech. Eng. 1. Meat Inspection 1. Pharmacy 2. English 2. Spanish 2. Graphics 2. Vet. Medicine 3. Org. Chemistry (1,2) 3. Mathematics 4. Drawing	1. Civil Eng. 1. Drawing (Arch.) 1. Mech. Eng. 1. Mining Eng. 1. Pharmacy 1. Surgery 1. Theoretical Chem. 2. Military Tactics 3. Histology 3. Mathematics 4. Drawing 4. Mechanic Arts	1. Plant Path. (1,2) 1,2,3. Clinics 3,4. Mechanic Arts Chemical Lab. Elec. Lab. Field Work
P. M.—2-6	1. Civil Eng. Thesis (2) 1. Struc. Des. (1,3) 1. Entomology (1,3) 1. Forestry (2) 1. Mech. Lab. 1. Toxicology (3) 1,2,3. Anatomy Lab. 1,2,3. Chem. Lab. 1,2. Clinics (1,2) 1,2. Drawing (Arch.) 1,2. Elec. Lab. 2. Field Work (3) 1,2. Machine Work 2. Botany (Agr.) 2. Pharmacy 2. Str. Drafting (1) 2. Road Mat. Lab. (2) 3. An. Husb. (1,2) 3. Horticulture (3) 3. Desc. Geometry 3. Mechanic Arts 3. Phys. Lab. 4. Mechanic Arts 4. Surveying (2,3)	1. An. Husb. Lab. 1. Horticultural (Lab.) 2. Agriculture (1,3) 2. Botany (Agr.) (2) 2. Mineralogical Lab. 1,2,3. Anatomy 1,2. Clinics 1,2. Drawing (Arch.) 3. Botany 3. Mechanic Arts 3. Desc. Geometry 4. Mechanic Arts 4. Surveying (2,3) Elec. Lab. Military Drill	1. C. E. Thesis (2) 1. Struc. Dec. (1,3) 1. Live St. Man. 1. Mech. Lab. 1. Plant Path. (1,2) 1. Toxicology (3) 1,2,3. Anatomy 1,2,3. Chem. Lab. 1,2. Clinics 1,2. Drawing (Arch.) 2. Field Work (3) 1,2. Machine Work 2. Botany (Agr.) (1,3) 2. An. Ind. Lab. (2) 2. Horticultural Lab. 2. Str. Drafting (1) 2. Road Mat. Lab. (2) 3. Agriculture (1,3) 3. An. Husb. (2) 3. Desc. Geometry 3. Public Speaking 3. Mechanic Arts 3. Phys. Lab. 3. Phys. Lab. 4. Mechanic Arts 4. Surveying (2,3) Elec. Lab. Work	1. Agriculture 1. Spec. and Bldg. Materials 1. Telephone Lab. 1,2,3. Anatomy 1,2. Clinics 1,2. History 2. Elec. Lab. 2. Horticultural Lab. 2. Mineralogical Lab. 3. Desc. Geometry 3. Mechanic Arts 3. Botany 4. Mechanic Arts 4. Surveying (1) Military Drill	1. C. E. Thesis (2) 1. Struct. Des. (1,3) 1. Horticulture (1) 1. Machine Design 1. Mech. Lab. 1. Toxicology (3) 1. An. Husb. (2) 1. Farm Engines 1,2,3. Anatomy 1,2,3. Chem. Lab. 1,2. Clinics 2. Field Work (3) 1,2. Machine Work 2. Botanical Lab. 2. Drawing (Arch.) 2. French 2. Graphic Stat. (2) 2. Str. Drafting (1) 2. Road Mat. Lab. (2) 3. Public Speaking 3. Zoology 3. Horticulture (3) 3. Mechanic Arts 3. Phys. Lab. 4. Mechanic Arts Elec. Laboratory 4. Surveying (2,3)	

Chapel Service daily 7:45 A. M.

Number prefixed denotes classes—1 denotes senior; 2 denotes junior, etc. Numbers affixed—(1), (2), (3), denote terms

DESCRIPTION OF COURSES



ACADEMIC DEPARTMENTS

PSYCHOLOGY AND ECONOMICS.

PROFESSOR THACH.

PROFESSOR RUTLAND.

PROFESSOR CERTAIN.

1. Courses in psychology will be given in the department of education.

2. Economics. The object of this course is to give the student a general view of economics. It includes a study of wealth, value, price, competition, monopolization, production, and distribution; the evolution of industry, and the leading economic questions of today. Collateral reading, oral reports, and occasional written papers are required. *Two hours, second and third terms.*

ENGLISH

PROFESSOR RUTLAND.

PROFESSOR CERTAIN.

INSTRUCTOR WHITE.

INSTRUCTOR LEACH.

ASSISTANT FINCKEN.

ASSISTANT WORLEY.

The mastery of one's native language is a pre-requisite to high attainment in any profession. In a technological institute, where only brief courses in foreign languages can be pursued by most of the students, this mastery of the native speech becomes, if possible, even more essential to future success than in the classical colleges. This consideration alone would justify courses in English in technological institutions, but when we add to this the great cultural value of the study of language and literature, the wisdom of compulsory courses becomes obvious. The courses in English comprise the study of the theory of composition together with much practice in its application, both in writing and in speaking, a survey of the history of American and English literature, and an intensive study of the greatest periods and writers in English literature.

Requirements in English for admission are set forth on page 57. No student will be classed as regular in any course until he has met these requirements.

The requirements as to thesis and as to proficiency in Eng-

lish for certificates and diplomas are set forth on pages 64 and 182.

The following courses are offered:

FRESHMAN CLASS.

102. (a) Composition for freshmen. The principles of exposition, narration and description are studied, but special emphasis is given to the different types of exposition. Weekly themes and frequent exercises are required. When practicable, the instructors hold fortnightly conferences with students in order to correct, assist, and stimulate them. Text-book to be announced. *Three hours, first term; two hours second and third terms.*

(b) American literature for freshmen. A survey of the history of American literature together with the study of selected masterpieces. The recitations will be devoted chiefly to the discussion of the literature assigned for study, but the students will be required to master a concise history of the subject and to keep notes on both the history and the selections. Text-books to be announced. *Three hours, second and third terms.*

(c) Types of literature. This course is an appreciative study of some of the chief literary types—the essay, the drama, lyric and narrative verse, and the novel. Illustrative readings will be selected for the most part from American literature, but not entirely. *Two hours, first term.*

(d) Public speaking. This course is a study of the principles of public speaking. Attention is given to voice building, bodily expression, and oral interpretation of selected speeches. Those taking the course during first term will substitute it for (c), those taking it in the second or third terms will substitute it for (a). Text-book: Winter's *Principles of Public Speaking*. *Two hours, half term.*

SOPHOMORE CLASS.

103. (a) Argumentation for sophomores. This course consists of the study of the essentials of argumentation and requires extensive practice in gathering material, note-making, brief making, analysis and criticism of evidence, and practical debating. Weekly themes in argumentative form and one lengthy argument at the end of the course are required. Text-book: Pattee's *Practical Argumentation*. *Three hours, first term.*

(b) Debating for sophomores. All sophomores are required to meet at least once fortnightly at some other hour than the

regular recitation period for drill in parliamentary law and for practice in actual debating.

(c) English literature for sophomores. This course covers the whole range of English literature from Anglo-Saxon times to our own and consists of the interpretive and critical study of selected poetry and prose. The aim is to give the student not only a definite conception of the periods of literature and of the forces in life that found expression in literature, but also an appreciative understanding of the greater writers and productions. The students are required to keep full notes on the lectures as well as on the class study of selections. Text-books to be announced. *Three hours, second and third terms.*

(d) Public speaking. This course may be chosen by sophomores instead of the actual debating required in (b). It is a study of the ends of speech-making and the means of securing effectiveness. Emphasis is placed upon the principles of composition and comprises practical exercises in collecting and organizing material in addition to the study of style and structure of selected speeches and readings. Text-book: Phillips' *Effective Speaking*.

JUNIOR CLASS.

107. In the junior and senior years students pursuing the general course may form a separate section from the rest of the class. This section is required to do a greater amount of reading and written work than the technical students. Juniors may elect one of the following courses, but the department reserves the right to omit a course in case only a very small number elect it.

(a) Nineteenth century literature. The time will be about equally divided between Wordsworth and his contemporaries and the writers of the Victorian period. The course will involve wide reading, discussions of the technic of the writers, their art, growth of mind, general interpretation of life, and their relation to their own time and discussions of the various movements in science, politics, philosophy, and art in their relation to the literature of the period. The work is carried on partly by lectures and partly by class study of representative masterpieces. Students will be required to take notes on both lectures and class discussions, and to write weekly reports or themes. Text-books will be announced. *Three hours, entire session.*

(b) The essay and the novel. The larger part of the first term will be given to the study of the origin and development of the English Essay. Selected essays representing the seven-

teenth and eighteenth centuries will be read and much time will be devoted to the essay of the nineteenth century. The rest of the year will be devoted to the history of the novel. Representative novels from the eighteenth century to the present time are studied; and special attention is given to technic, plot and character analysis, relation to other forms of literature, the writer's conception of his art, and style. Text-book to be announced. *Three hours, entire session.*

(c) Contemporary literature. This course includes a study of recent tendencies in the drama, novel, short story and essay. Magazines such as the Atlantic Monthly, the Nation or the Dial are used as points of departure but most of the work will consist of extensive assigned readings out of class, together with class-room reports and discussions. Open also to seniors. *Three hours, entire session.*

SENIOR CLASS.

108. The following courses are offered for seniors:

(a) Shakespeare. The development of the English Drama before Shakespeare will be reviewed briefly through assigned reading and lectures and the life of Shakespeare will be included in the matter for final examination, but the class room instruction will be devoted chiefly to a careful study of the plays. During the first few weeks several plays of the different types and representative of the different periods of authorship are given brief treatment. Most of the time, however, is given to the close study of two plays, one comedy and one tragedy. Text-books to be announced. *Two hours, first term.*

(b) Advanced composition. This course is open to any student who has completed freshman and sophomore English and is planned to be of practical benefit to engineers and agriculturists. While general effectiveness in composition is the central aim, the forms of journalistic writing will be studied with the view of giving technical students practice in the preparation of compositions for publication. *Three hours, entire session.*

110. Methods of teaching English: If a sufficient number of students apply to the head of the department, a course in methods of teaching English will be offered, the text-book and hours to be determined later.

GRADUATE STUDENTS.

The following courses have been given to graduate students:

(a) Shakespeare: Hamlet, Othello, Macbeth, Merchant of Venice, As You Like It, Henry IV, Richard III, King John.

(b) Dryden's Poetical Works: Arnold's Dramatic Poesy.

Yonge's Essay on Satire, Saintsbury's Dryden, Pope's Poetical Works, Pattison's Satire, Stephen's Pope, Gosse's From Shakespeare to Pope, and Eighteenth Century Literature.

(c) English literature of the eighteenth century: Addison, Pope, Gray, Goldsmith, Burns, Cowper, and Burke.

(d) American literature: Longfellow, Lowell, Poe.

(e) The English essay: Bacon, Addison, Steele, Swift, Johnson, Goldsmith, Macaulay, DeQuincey, Lamb, Carlyle.

(f) Milton's Poetical Works: Life, Pattison, Brooke.

(g) Elizabethan, Jacobean, and Caroline literature; Greene, Jonson, Marlowe, Webster, Beaumont, and Fletcher, Brown, Herrick, Bunyan and others.

(h) English literature, 1832-1894.

(i) Chaucer.

(j) English prose fiction.

For the year 1916-17, one of the following courses may be elected by the graduate class:

Anglo-Saxon: A study of the grammar and phonology of Anglo-Saxon, together with the reading of select prose and verse. The class will probably read a portion of Beowulf.

Chaucer: A study of the life and times of Chaucer together with the readings and critical study of a large portion of his collected writings.

Prose fiction: A study of the development of English fiction with special emphasis upon the modern novel.

Shakespeare: A critical study of the dramatist's art.

HISTORY AND LATIN.

PROFESSOR PETRIE.

INSTRUCTOR REYNOLDS.

INSTRUCTOR WHITE.

ASSISTANT WORLEY.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that history is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. The students are taught to investigate the growth of ideas and institutions, the rise and progress of great historical movements, and the reciprocal influences of men and circumstances. Frequent use is made of diagrams, photographs, charts and maps, with which the department is well equipped. Instruction is given by text-books, lectures

and class discussion, but a constant effort is made to stimulate to wider reading and research in the library. The following courses are offered:

FRESHMAN CLASS.

201. Industrial and constitutional history of the United States: The course consists of lectures and text-book work, and is somewhat advanced. All students who take it must have previously completed some high school text-book on the history of the United States. Text-books: Hart's *Formation of the Union*; Wilson's *Division and Reunion*. *Two hours, entire session.*

SOPHOMORE CLASS.

202. History of Modern Europe: Required of all members of the sophomore class. Some previous knowledge of the subject is desirable, but not necessary. Text-book, Hazen's *Europe Since 1815*. *Two hours, first and second terms.*

204. A brief course in recent history: Not required of any students, but those who expect to take the general course may take this work. Text-book: Hazen's *Europe Since 1815*, and current periodicals. *Three times a week, third term.*

SENIOR CLASS.

205. English constitutional history: A course for one year for members of the senior class. Text-book will be announced later.

JUNIOR AND SENIOR CLASSES.

206. Historical laboratory: An opportunity for advanced work in United States history, for those students of the general course who elect it as laboratory work, and for any others who are properly qualified.

The chief object kept in view is training in historical research and in the formation of independent but careful opinions based on the original sources of information, as well as on the standard authorities. Emphasis is laid on the importance of securing proper material for investigation, and every incentive is given to the collection and use of new documents, papers, and letters illustrative of Southern and especially of Alabama history. The method of work is as follows: Informal lectures are given on important and suggestive points, as: The cause of the Revolution; the Constitutional Convention; the War of 1812; the Missouri Compromise; the Monroe Doctrine; Texas and Mexico; the Compromise of 1850; the Kansas Struggle; the Dred Scott Decision; Secession. After each lecture a general discussion follows, and topics connected with it are

assigned to the students with an outline of the points to be investigated. The final results are collected by each student according to his own judgment in his note-book, which is then passed in to the professor for correction and suggestion. Text-book: McDonald's Select Statutes. *Six hours, entire session.*

International Law: A brief course is offered for those students who expect to enter the army or navy. *One hour a week.*

GRADUATE COURSE.

207. Graduate students are expected to take part in the junior and senior discussions, and will also meet with the professor for conference about their work. Each year some special field is taken for investigation and discussion. Those who take history as their major study are expected to devote a large part of their time to research upon some topic upon which they can consult the original sources of information.

208. Teachers' course: Conferences every other week with those students who expect to teach history.

LATIN.

The objects kept in view in this department are: An accurate knowledge of the forms and syntax; a familiarity with Latin words, their etymology and their English derivatives, an appreciation of Latin literature and an intelligent conception of Roman history and civilization, both in themselves and in their effect on the modern world.

A systematic course of instruction is given in the forms and syntax. These are taught both deductively from a grammar and inductively from the text read. Translation is constantly practiced, sometimes at sight, sometimes after being assigned for preparation. English passages based on a familiar author or illustrative of special constructions are put in Latin, both orally and in writing. Great emphasis is laid on the etymology of the words in the text read.

In connection with every author studied in class, a course of reading in English is prescribed descriptive of his life, work and times. The historical setting and the literary value of his writings are carefully discussed and frequent comparisons are made with modern authors.

In the freshman and sophomore classes, the study of the language is the chief point. In the higher classes a broader view is taken. The junior class makes a special study of Roman history and Roman historians. The senior class studies Roman poetry and Roman life.

The following courses are offered with the text-books named:

209. Freshman class: Exercises, Cicero, Sallust, or equivalent. Allen and Greenough's Latin Grammar. *Three hours, first term; four hours, second and third terms.*

210. Sophomore class: Livy, Allen and Greenough's Grammar, Bennett's Latin Composition. *Five hours, entire year.*

211. Junior class: Livy, Tacitus, grammar, Roman history, exercises. Allen and Greenough's Grammar, Botsford's History of Rome. *Three hours, entire year.*

212. Senior class: Horace, Plautus, Latin literature, grammar. Allen and Greenough's Grammar. *Three hours, entire year.*

213. Pedagogical course: During the spring term a pedagogical course is given in Latin. It is designed chiefly, but not exclusively, for members of the senior class. It includes a discussion of the methods of teaching forms and syntax, as well as concrete illustrations of the way to overcome the difficulties in Caesar and Virgil.

MODERN LANGUAGES.

PROFESSOR WIATT.

ASSISTANT ELIZONDO.

The chief aim in this department is to give the student a thorough and accurate knowledge of the elementary principles of the subjects taught, and to enable him to read with facility the ordinary French and German at sight. To train the ear, acquire a correct pronunciation and some facility in speaking, all recitations are supplemented, as far as practicable, by oral exercises in the languages themselves.

Opportunity for the study of Spanish is given students who elect that language.

FRENCH.

JUNIOR CLASS.

301. (a) A course covering the essentials of grammar and pronunciation to enable the student to begin the reading of simple French prose. This course continues through the first term, three hours a week being given to the study of grammar and one hour to pronunciation and conversation. *Four hours, first term.*

(b) The second term includes a course of reading in simple

prose (2 hours a week), and the continuation of grammar with translations of English into French (1 hour a week). *Three hours, second term.*

(c) During the third term the reading of more advanced selections in prose and poetry is begun (2 hours a week), grammar and composition (1 hour a week); and pronunciation and conversation (1 hour a week). *Four hours, third term.*

SENIOR CLASS.

302. (a) A course in reading: Corneille and modern French plays (2 hours a week); laws of grammar and composition (1 hour a week); pronunciation and conversation (1 hour a week). *Four hours, first term.*

(b) The second term is given to the study of Racine, and the reading of modern French literature (2 hours a week) and to continued study of the structure and syntactical features of the languages in connection with translations into French. *Three hours, second term.*

(c) The third term includes a study of Moliere (1 hour a week); the history of French literature (1 hour a week); more advanced work in grammar and composition (1 hour a week); and pronunciation and conversation (1 hour a week). *Four hours, third term.*

303. Teachers' course: During the spring term the work of the senior class will be so modified or supplemented, as to include a short pedagogical course for students who expect to teach French. This will consist chiefly of elementary work in grammar and syntax and a study of the best methods of giving instruction in this subject. *Third term, senior year.*

GRADUATE STUDENTS.

304. Graduate course: Offered for students who wish to pursue the study of French beyond the scope to which a two-year course necessarily limits them. In addition to the authors studied in the lecture room, a wide and extensive reading of literature is prescribed.

TEXT-BOOKS.

First year: Frazer and Squair's Shorter French Course; Francois and Giroud's Simple French.

Second Year: Corneille, Racine, Moliere, selected modern French plays, Duval's Histoire de la Literature Francaise; Frazer and Squair's French Grammar, French Composition.

GERMAN.

The following regular courses are given:

JUNIOR CLASS.

305. (a) A course embracing the fundamental principles of grammar and the essentials of pronunciation leading to the intelligent reading and translation of simple German texts (3 hours a week), and exercises in pronunciation and conversation (1 hour a week). *Four hours, first term.*

(b) In the second term the reading of simple prose is begun (2 hours a week), and grammar and composition continued (1 hour a week). *Three hours, second term.*

(c) Reading of more difficult selections of prose and poetry is begun and continued throughout the third term (2 hours a week). Grammar and composition continued (1 hour a week), and conversational exercises (1 hour a week). *Four hours, third term.*

SENIOR CLASS.

306. (a) A course of reading in modern German (2 hours a week); structure and syntax of the language with translations into German (1 hour a week); conversation (1 hour a week). *Four hours, first term*

(b) Schiller (2 hours a week); History of German literature and composition (1 hour a week). *Three hours, second term.*

(c) German lyrics and ballads (2 hours a week). German literature (1 hour a week), composition and conversation (1 hour a week). *Four hours, third term.*

307. A course for students from the scientific schools, including readings of various scientific subjects, selected to meet the requirements of the class (2 hours a week), grammar and composition (1 hour a week) and conversation (1 hour a week). *Four hours, entire session.*

308. Teachers' Course: During the third term in the senior class of German, the course will be so modified, or supplemented, as to include a short pedagogical course for those students who expect to become teachers of this language. This will consist chiefly of elementary work in grammar and syntax, and a study of the best methods of giving instruction in the subject.

GRADUATE STUDENTS.

309. Advanced course: For those students who wish to pursue the study of German beyond the scope to which a two-year course necessarily limits them. Here, in addition to

the authors studied in the lecture room, a wide and extensive reading of authors and literature is prescribed.

TEXT-BOOKS.

First Year: Wesselhoeft's German Grammar, Super's German Reader.

Second Year: Schiller, Lessing, selected modern German plays, German lyrics, Bernhardt's Deutsche Litteraturgeschichte, Joynes-Meissner's German Grammar, German Composition.

SPANISH.

310. A course in Spanish is also given, embracing the fundamentals of the language, consisting of a study of the grammar, readings of modern Spanish selections and exercises in conversation. *Three hours, entire session.*

Texts: Coester's Spanish Grammar; Harrison's Commercial Reader.

MATHEMATICS.

PROFESSOR CRENSHAW.

PROFESSOR MESSICK.

ASSOCIATE PROFESSOR SHI.

INSTRUCTOR PATRICK.

INSTRUCTOR STOKES.

INSTRUCTOR DONAHUE.

ASSISTANT DONEHOO.

ASSISTANT MELVIN.

The courses of instruction offered in this department are designed to give the student that mental discipline and training in logic which will enable him to think and reason logically; as well as a thorough knowledge of the principles and formulas of pure mathematics and their practical applications in the engineering and other scientific professions.

The courses offered in the different classes in this department are as follows:

FRESHMAN CLASS.

401. Plane Trigonometry. *Five hours, first term.*

402. Advanced Algebra. *Five hours, second and third terms.*

SOPHOMORE CLASS.

403. Analytic Geometry. *Five hours, first and second terms.*

404. Introductory Course in Calculus. *Five hours, third term.*

JUNIOR CLASS.

405. Calculus. *Five hours, entire year.*

GRADUATE STUDENTS.

407. Differential Equations. *Two hours, entire year.*

408. Methods of teaching mathematics. The department offers a course designed for teachers of elementary mathematics, or for those who expect to make this their profession. The elementary branches of mathematics will be reviewed and methods of teaching briefly discussed, keeping constantly in view the co-ordination of the lower branches with the higher. The course will include also a brief *resume* of the history of the elementary subjects, a critical examination of the extant text-books; and finally, an outline of a course of study in advanced mathematics to be pursued by the teacher.

409. Projective Geometry. This course which aims to present the elements of the subject, will be offered to seniors and graduate students in architecture and engineering and to those properly equipped who wish to pursue the subject of mathematics. *Hours to be arranged, third term.*

Text-books used in this department will be announced later.

PHYSICS.

PROFESSOR DUNSTAN.

ASSOCIATE PROFESSOR WOOTEN.

INSTRUCTOR SPANN.

The complete course in physics extends over two years and it is designed to give as far as possible an adequate and correct idea of the method of physical science, and to lay the foundation for subsequent advanced work if the student desires to pursue the work further or intends to engage in any of the great engineering professions of which physics forms so important a basis.

Two of the courses offered are given in the sophomore year, one being a lecture course and the other a course in laboratory work. The lectures are illustrated by lecture table experiments, and the students are required to work numerous problems and exercises.

SOPHOMORE CLASS.

504. A lecture course in general physics required of all students who are candidates for the degree of Bachelor of

Science. For entrance upon this course the student should have had one year's work in elementary physics and a working knowledge of plane trigonometry. The subjects treated are varied from year to year, but they consist in the main of mechanics of rigid bodies, heat, light, sound, electricity, etc. Written exercises will be required each week. *Three hours, entire session.*

502. This is a laboratory course which is required of all students in engineering. Non-engineering students may select it as an optional subject. The laboratory experiments are carefully selected and they comprise work in general mensuration with instruments of precision, heat, light, sound and electricity. The student is required to write a full report of each experiment as he completes it, and the form of compiling data and expressing methods and results is given great weight in determining average grades. The work in the laboratory will be arranged so as to co-ordinate as far as possible with the work treated in the lecture course. Entrance into the laboratory course requires that the student shall have had at least one year of elementary physics. *Two hours, entire session.*

JUNIOR CLASS.

Students in the junior class will take course 504 with the sophomores during the session of 1916-17.

SENIOR CLASS.

505. This lecture course is more advanced than the one given to the sophomores and it presupposes a knowledge of the calculus, both differential and integral. The subjects treated are varied from year to year. They are treated thoroughly and rigorously and the student is encouraged to learn to use the language of mathematics in expressing his ideas. Attention is paid to the history of the development of the various subjects treated. Written exercises are required each week. *Two hours, first and second terms.*

506. Astronomy. A brief course in descriptive astronomy. *Two hours, third term.*

GRADUATE STUDENTS.

508. Mechanics. A course in mechanics is offered in which the methods of vector analysis are applied to the derivations of various principles and in the solutions of various problems. The course presupposes a thorough working knowledge of analytical geometry and the calculus. *Two hours, entire session.*

MILITARY SCIENCE AND TACTICS.

COL. B. S. PATRICK, *Commandant*.

Military science and tactics are required by law to be taught in this institution. The law is faithfully carried out by imparting to each student, not physically incapacitated to bear arms, practical instruction in the school of the soldier, of the company, and of the battalion in close and extended order, in guard mounting, inspection, parades, reviews, etc.

Under section 1225, U. S. Revised Statutes, the college is provided with U. S. Magazine rifle, calibre 30 model 1898, and accoutrements.

The following uniform of standard cadet gray cloth has been prescribed for dress; coat and trousers as worn for fatigue at West Point, with dark blue cadet cap. A neat and serviceable uniform can be obtained for \$15.50. This is less expensive than the usual clothing. All students are required to wear this uniform during the session.

The entire body of students is organized as a regiment of two battalions. The officers are selected for military efficiency, good conduct and scholarship. The commissioned officers will be selected from either the senior or the junior class, and promotion will depend on merit and not wholly on seniority.

A band composed of cadets furnishes appropriate music at all reviews and parades and on other special occasions.

A student who has once accepted an office cannot resign it except for reasons entirely satisfactory to the president and the commandant. The resignation of an office will usually not be considered without first placing all the circumstances to the case before his parent or guardian.

Candidates for appointment or promotion may be required to stand an examination. Moral fitness, including demerits, will be considered.

Each company is officered by one captain, two first lieutenants, one second lieutenant, and a proper number of non-commissioned officers. The officers and non-commissioned officers are distinguished by appropriate insignia of rank. These appointments are confirmed by the president on the nomination of the commandant.

On the graduation of each class the names of such students as have shown special aptitude for military service will be reported to the Adjutant-General of the U. S. Army and to the Adjutant-General of their respective States.

The theoretical course in military science and tactics is be-

gun in the junior and continued throughout the senior year.

The following are the courses prescribed:

JUNIOR CLASS.

600. Military drill: Required of all freshmen, sophomores, and juniors not physically incapacitated to bear arms. *Three hours, entire year.*

601. Infantry drill regulations. *One hour, first and second terms.*

602. Firing regulations for small arms. *One hour, third term.*

SENIOR CLASS.

603. Manual of military science (Moss). *One hour, half first term.*

604. Field service regulations: *One hour, half first term and second term.*

605. Manual of guard duty: *One hour, third term.*

EDUCATION.

PROFESSOR JUDD.

PROFESSOR BLASINGAME.

The Department of Education was established by order of the Board of Trustees, June, 1915. This action was taken:

1. Because a large number of the graduates of the Institute each year enter the field of education as teachers and principals.

2. Because of the increasing demand in the State of Alabama for professionally trained teachers.

3. Because of the new emphasis on rural life and education, creating a demand for teachers and principals acquainted with the rural sciences and industries in the district agricultural and the county high schools.

4. Because of the increasing number of positions in the city schools requiring teachers especially trained in the sciences.

5. Because of the increasing demand for men of academic and professional training for the position of county superintendent.

For several years the Institute has offered courses in special methods in some of its departments. It has worked in co-operation with the district agricultural and county high schools through furnishing a visitor and inspector, whose reports are regularly filed with the State Department of Education.

PURPOSE.

The Institute purposes, through its various Colleges and the Department of Education, to meet as liberally as possible the demands from the several divisions of the field of education as indicated above. It does so with a consciousness of obligation in two directions:

1. To the State—whose creature it is, from which it draws support, and to which it owes the most faithful, efficient, and complete service.

2. To its students—who elect to pursue here courses in academic and scientific subjects, necessary as a fundamental preparation for teaching.

The State Department of Education, by recent ruling, will grant to certain graduates of the leading colleges of Alabama first-grade and life certificates. The requirements for these certificates are that graduates must have pursued courses in education, the minimum number of hours in which shall be for:

1915-1916	-----	6 hours
1916-1917	-----	7 hours
1917-1918 and thereafter	-----	9 hours

COURSES OF INSTRUCTION.

Education 1. Elementary Psychology and Educational Psychology: Text-books, lectures, and assigned readings. Elective for both academic and professional students of junior standing.

The aim of this course is twofold:

1. To introduce the student to the subject-matter and methods of general psychology.

2. To present the psychological principles which underlie the process of learning.

For present year this course is open only to students who have taken, or are taking, Education 2, 5, and 6, and with the consent of the professor in charge. *Three hours, the year.*

Education 2. Principles of Education: A consideration of the aims, principles, and processes of education. Lectures, readings, and discussions. Elective for both academic and professional students of junior and senior standing. Required of applicants for recommendation for the State Teacher's Certificate.

This course will present a scientific study of education from the psychological, biological, and sociological points of view. The considerations will be the nature of the educable being and

the character of his environment, adjustment to which and control over which constitute the chief aim of education. *Three hours, the year.* Sec. I. *M., Tu., Th.* 8-9; sec. II. *M., W., F.* 9-10.

Education 3. A study of Adolescence: Devoted to a consideration of the characteristics and needs of the high school age. Elective for both academic and professional students of junior and senior standing. Text-books and lectures.

The objects of the course are:

1. To discover as far as possible the natural tendencies and characteristics of the period of youth.
2. To determine how they can best be brought to a successful issue in maturity, through the proper adaptation of the organization and administration of the high school to the physical, mental, and social needs of boy and girl life.

Attention is called to Education 4, which constitutes the second half-year's work. *Three hours, first half-year.*

Education 4. Sociology: An elementary study of society and social problems. Elective for both academic and professional students of junior and senior standing. Text-books, lectures, and discussions.

The object of this course is to acquaint the student with the nature, laws, and objects of society, as conditioning the content and method of education.

Attention is called to Education 3, which constitutes the first half-year's work. *Three hours, second half-year.*

Education 5. Secondary Education: The American High School, its organization, management, and administration. Text-books, assigned reading, reports, and discussions. Elective for both juniors and seniors in Education. Required of applicants for recommendation for the State Teacher's Certificate.

A critical examination of typical high schools, emphasizing the function, course of study, social needs, equipment, training and qualification of teachers, and similar matters of administration. Especial emphasis will be placed upon the high school curriculum, including the best modern methods, equipment and material pertaining to the teaching of the different high school subjects. A study of the special problems confronting Alabama with respect to the establishment and development of public high schools. Throughout the entire course, the relation of the high school to the community will be stressed. *Three hours, first and second terms.*

Education 6. Principles and Practice of Teaching: A study of the principles of school management, discipline, and teach-

ing. Text-books, lectures, observations, reports, and discussions. Elective for juniors and seniors in Education. Required of applicants for recommendation for the State Teacher's Certificate.

Observations in local city and rural schools, planning of lessons, criticism of recitation work. Illustrative lessons in the several subjects of the course of study. The work of the course will consider the practical problems of the classroom in their relation to the life of the community. *Three hours, third term.*

Education 7. Educational Sociology, Foundations of the School as a Social Institution: Lectures, readings, and discussions. Elective for both academic and professional students of junior and senior standing.

The social and industrial character of present-day country life and the district, village, and town school as its chief institution will be the concerns of this course. The chief problems of the home, the farm, and the associational life of the community will be discussed. The country school evolved in the endeavor to offer solutions to these problems will be defined. *Three hours, first term.*

Education 8. Rural Educational Practice: A survey and an evaluation of the practice of typical town and country schools. Assigned readings, investigations, reports and discussions. Elective for seniors in Education, and for teachers of experience.

It will be the purpose of this course to acquaint the student with the best practice found in our town and country schools. A survey of the work of some of the better district, village, and town schools of the United States will be made. Special features will be noted and an attempt made to evaluate them in terms of the environs of and the demands upon one's own school. The teacher's relation to the larger phases of school development and the daily problems arising in and about the school will receive attention. Bulletins from the United States Bureau of Education and from the various state departments of education and other special publications will be read. *Three hours, second term.*

Education 9. School Supervision: The principles and the administration of school supervision. Text-books, lectures, observations, and conferences. Elective for seniors in Education and for teachers of experience.

The principal topics considered in this course will be:

1. Supervisory officers,—superintendent and special supervisors.
2. General plan of supervision,—training of teachers in service, schoolroom visits, aids to teachers.
3. Observation and criticism of the process of instruction,—standards of the recitation, application of these standards as modified by local conditions, preparation of the recitation by teachers and pupils, conference with teachers, demonstration teaching by supervisor. *Three hours, third term.*

Education 10. School Curricula: An examination and an evaluation of social materials, and the principles in the construction of courses of study. Assigned readings, investigations, and reports. Elective for advanced students in Education.

The content and organization of courses of study will constitute the considerations of this course. An effort will be made to formulate the chief sociological demands of country life and to make out courses of study suitable to typical social and industrial situations. Concrete contributions of normal schools and schools of education in the leading colleges and universities and of specialists in education will be studied. Reports on first-hand investigations, and specimen curricula will be required. *Two hours, the year.*

Education 11. Library Methods: Organization, administration, and equipment: Lectures and practical work in the library. Open to seniors in Education.

The aim of this course is to train intending teachers in the organization, care, and administration of a school library. Particular regard will be had for the selection of books suitable to school and community needs and for the adjustment of the reading hours to the occupations and customs of the neighborhood. *One hour, the year.*

Courses in Education for which hours have not been assigned, will be scheduled at the opening of the fall session. Persons interested in the Department of Education are requested to write for the special bulletin.

METHODS IN TEACHING SPECIAL SUBJECTS.

Courses in special methods in teaching the various subjects designed for teachers in the schools of Alabama and for intending teachers will be offered upon application to the head of the department. The instruction is given by teachers of extensive experience, who are familiar with school conditions in the State.

Courses are offered in the following subjects:

English, History, Latin, French, German, Mathematics, Physics, Manual Training, Physical Geography, Drawing and Descriptive Geometry, Chemistry, Agriculture, Physiology and Hygiene, and Horticulture. Descriptions of these courses will be found in their respective departments.

SUMMER SESSION.

The Summer Session for 1916 will open on June eighth and continue to July nineteenth.

COURSES OF STUDY.

For College Credit: Those subjects most in demand will be offered every summer. Others will be offered once in alternate summers, still others, once in four summers. The aim will be to give opportunity to any student attending four summer sessions to pursue any study offered during the college year.

For Entrance Credit: Courses in high school history, English, Latin, mathematics, and others for which there may be sufficient demand.

Teachers' Courses: Special courses for teachers in high school physics, history, English, geography, physiology, drawing, mathematics.

The Newer High School Subjects: Agriculture, horticulture, animal husbandry, household economics, and manual training. Two aims will dominate these courses: First to present the subject-matter with a view of giving the teachers a thorough mastery of it; second, to indicate to them what portions of these subjects they may undertake to teach in the high school and how to select or improvise the necessary equipment.

Professional Courses: Psychology, educational psychology, school management and methods, supervision, administration, and rural sociology.

Elementary Methods: A course in primary and grammar grade methods, library methods, public school music, plays.

and games for children, writing and drawing, the common branches.

PURPOSE.

It will be the purpose through these courses to meet the needs of:

1. The various types and classes of teachers in the State of elementary, high school, and college level.
2. College students who wish by means of summer study to shorten their term in college or to make up back studies.
3. Prospective college students, who may be irregular in their studies and who wish to remove entrance conditions.

FACULTY.

The Summer Session faculty will comprise members of the regular college staff, specialists in education from other institutions, and practical supervisors and superintendents.

EXPENSES.

The cost of attendance upon the summer session is moderate. Board and lodging for the session may be secured for \$20 to \$30. The registration fee is \$3.00. Tuition is free to all pursuing courses for teachers. A small fee is charged for laboratory courses, for college credit and entrance courses, and for certain courses in athletics.

FULL ANNOUNCEMENT.

The Summer School Bulletin announces courses and members of the faculty and gives all needed information. Persons interested may obtain a copy of the bulletin upon request.

COLLEGE OF ENGINEERING AND MINES

CIVIL ENGINEERING.

PROFESSOR MITCHAM.

ASSISTANT PROFESSOR STELZENMULLER.

ASSISTANT DONEHOO.

FRESHMAN CLASS.

102. Plane surveying and levelling: A longer course required of all engineering students. Instruction will be given in the use, care, and adjustment of instruments; standardizing tapes; determination of true meridian and magnetic declination; U. S. Public Land Surveys; methods of retracing old lines; farm surveys by various methods; plotting and calculating areas; dividing lands; surveying and mapping existing roads and streets; laying out townsites and establishing permanent monuments for same; differential levelling; profile levelling; construction of profiles and establishing grades; cross-section levelling; calculation of volumes of excavation and embankment; topographic surveying; mapping; terracing; staking out and giving grades for sewers, ditches, and drains; staking out buildings, etc. *Lectures and recitations, three hours, field practice two hours, second and third terms.*

SOPHOMORE CLASS.

103. Higher surveying: Required of civil engineering students. Instruction will cover hydrographic surveying; mining surveying; city surveying; geodetic surveying and projection of maps. *Lectures and recitations two hours, field practice two hours, third term.*

104. Railway surveying: Required of students pursuing courses in civil and mining engineering. Instruction will cover preliminary surveys; theory of simple, reversed, and compound curves; transition curves; railway grades; vertical curves; construction surveys; calculation of quantities involved in railway construction. *Three hours recitations and two hours practice, first term.*

106. Railway surveying: A course involving additional study of the railroad spirals; problems in location; fixing grades with reference to economy in construction and operation; approximate estimates of quantities from profiles; cross-sectioning and calculating of excavation and embankment; calculation of overhaul; borrow pits; planning, and staking



William LeRoy Brown Engineering Hall

out railway structures. *Two hours recitations and two hours field and office practice, second term.*

JUNIOR CLASS.

107. Roads and pavements: A course of lectures and recitations covering economic principles involved in road improvement; analysis of resistance to traction; location, grades, and drainage of new roads; relocation and improvement of existing roads; construction of earth, gravel, macadam, concrete, brick, and bituminous roads, with study of properties of the various materials used in road construction, the methods employed in testing them, and the best specifications for constructing roads with the several materials; street plans of cities and towns; width and grades of streets; curbs and gutters; construction of various kinds of street pavements; storm drainage systems for cities; and construction of sidewalks. *Five hours, first term.*

108. Road materials laboratory: The study and testing of various materials used in the construction of roads and pavements. The purpose of the course is to give the student an opportunity of becoming familiar with the physical properties, relative merits, and methods of testing the various materials. *Four hours, second term.*

109. Road and street improvement: A practical field and office course in making surveys, plans, and estimates for road and street improvements. *Six hours, third term.*

111. Graphic Statics: A course of lectures and drafting room exercises covering fundamental principles of equilibrium; composition and resolution of forces; the equilibrium polygon; graphical determination of stresses in trusses and framed structures; bending moment and shear in beams; center of gravity of given sections; moment of inertia. *Lectures two hours, drafting three hours, third term.*

112. Structural drafting: The purpose of this course is to acquaint the student with the details of structural steel work, to train him in the neat and accurate execution of drawings, and to teach him in a practical way to solve some of the simpler problems in structural mechanics. *Six hours, first and second terms.*

SENIOR CLASS.

113. Theory of structures: The purpose of this course is to teach the fundamental theories underlying the design of bridges, roofs, and other framed structures of metal and timber. The discussions cover determination of outer and

inner forces acting on the structure; concentrated live load systems; design of beams, plate girders, simple trusses, bridge trusses with secondary web systems, lateral and portal bracing, transverse bents, viaduct towers, cantilever bridges, three-hinged arches. *Five hours, first term.*

114. Structural design: This is a drafting room course in the practice of bridge and structural design, and is the complement of course 113. Complete designs are worked out for a number of structures. *Nine hours, first and third terms.*

115. Railroad engineering: The discussions cover the inception, promotion, and organization of railroad projects, organization and construction; the duties of the engineer; alignment and grades; rails and rail fastenings; cross ties; ballast and roadbed; culverts; bridges, and minor structures; turnouts; sidetracks and yards; terminals; elevation of outer rail; signalling; the locomotive and its work; the locomotive and grade problems; railroad expenditures; relation of operating expenses to number of trains; effect of rise and fall, distance, and curvature to train mile costs; railroad location, construction, and betterment surveys. *Three hours, first term.*

116. Theoretical hydraulics: The discussions cover fluid pressures; equilibrium of floating bodies; fundamental principles of hydro-mechanics; methods of measuring the flow of water; Pitot tube; Venturi meter; orifices; tubes; sluices; weirs; nozzles; fire hose; flow in open channels, sewers, conduits, etc; flow in pipes; dynamic action of flowing water; impulse wheels; turbines of various types; centrifugal pumps. *Five hours, second term.*

117. Practical hydraulics: This course is the complement of course 116, and its purpose is to bring the student into close touch with practical hydraulics. The work includes the determination of coefficients of orifices, tubes, and nozzles, determining loss of head in pipes and fire hose; measurement of water by weirs and meters; testing meters and pumps; gauging streams with current meter; visits of inspection to hydro-electric power plants under construction and in operation and reports on same. *Three hours, third term.*

118. Concrete and masonry construction: Discussions cover mathematical theories underlying the design of reinforced concrete beams, columns, slabs and arches; cements, limes and mortars; methods of mixing and placing plain and reinforced concrete; classification and properties of building stones; definition and construction of various classes of stone masonry; manufacture of brick; brick work; stone and brick arches;

retaining walls; piers and abutments; shallow foundations; coffer dams; crib foundations; pile foundations; pneumatic caissons; the freezing process; cylinder piers. *Three hours, second and third terms.*

119. Sanitary engineering: The discussions cover the history of sanitary science; sanitary measures necessary for the prevention of zymotic diseases; the engineer's part in the campaign for the prevention of disease; the sources of water supply, its collection, purification, and distribution; sewerage, and sewerage design; sewage disposal; construction of sewers; pumping of sewage; sewage treatment plant; sewage farms; collection and disposal of garbage and rubbish; street cleaning. *Five hours, third term.*

120. Thesis: Each candidate for a degree in civil engineering is required to prepare a thesis upon some engineering subject which he may select. It must be the record of original investigation of some engineering subject or an original design of some engineering structure or project. The applicant for a degree shall file a written announcement of his subject with the professor of civil engineering not later than October 1st of his senior year; and the thesis shall be completed and submitted for approval not later than May 1st. During the first term the candidate shall devote not less than four hours a week to reading and collecting data for his thesis; during the second term he shall devote not less than nine hours a week and during the third term until May 1st, not less than three hours a week to work on his thesis. He shall submit on Monday morning of each week a written statement of the time he has devoted to thesis work during the preceding week.

The student is also required to prepare and hand in one report or paper during first term and one during second term on subject of thesis or some allied subject approved by the professor.

SUMMER CAMP AND SCHOOL OF SURVEYING.

105. Practical work in plane and higher surveying supplementing the instruction given in courses 102 and 103: This work is given at the summer camp immediately after commencement, between freshman and sophomore years. The purpose of this course is to give the student uninterrupted practice in the solution of practical problems in surveying similar to those which he will meet early in his career as an engineer; and the course is in line with the policy of the institute to combine theory and practice in all its branches of technical instruction. Students in this course are required to make notes

of all the work done by the party to which he is assigned and to compute and plot all surveys made by his party. The parties will be made as small as the conditions to the work will permit so as to give each student the greatest possible amount of practice with the instruments. This course is required of all students who are candidates for graduation in civil, or mining engineering, and requires *forty-eight hours per week for four weeks*.

110. Practical work in railway, highway, and hydrographic surveying: This course is also given in the summer camp, and is required of all students who are candidates for graduation in civil or mining engineering, and will be taken between sophomore and junior years. The work includes the preliminary location and construction, surveys for a short line railroad, (about 2 miles), with maps, profiles, and estimates for same; all surveys, maps, profiles and estimates for a short line of highway, (about 2 miles); surveys for a dam and lake formed thereby; also gauging of stream flow with current meter. The time required for this course is *four weeks, forty-eight hours per week*.

The Institute furnishes tents, cots, camp stools, and all equipment of mess tents. The student will furnish his own bedding, soap and towels. A charge of \$18.00, payable in advance, will be made for each course and will be applied to payment of the expense of the camp.

GRADUATE STUDENTS.

121. Graduate engineering course: This course requires three hours a week to be devoted to recitations and five hours a week to practical work in field or drafting room, throughout the session. The subjects may be varied to fit the needs of the students taking the course, but will be chosen from the following: Reinforced concrete; bridge design; sewerage and water supply; specifications and contracts.

122. Thesis: Graduate students applying for the degree of civil engineer will be required to prepare and present a thesis, the regulations governing thesis work being the same as those prescribed for seniors.

ELECTRICAL ENGINEERING

PROFESSOR DUNSTAN.

PROFESSOR HILL.

ASSISTANT PROFESSOR WOOTEN.

ASSISTANT SPANN.

ASSISTANT RIVES.

JUNIOR CLASS.

201. Elementary theory of electricity and magnetism: A detailed study of the fundamental phenomena and laws of the subject. *Three hours, first term.*

202. Direct current machinery: Lectures and recitations on the principles of design, construction, installation, and operation of direct current generators and motors. This course treats in detail of the selection of machinery for given conditions, performance guarantees, acceptance tests for heating, regulation, efficiencies, etc., parallel running, troubles and remedies, and repairs. A large number of carefully selected problems are assigned for solution and every effort is made to have the course cover not only the fundamental principles but also the broader engineering problems connected with the choice and use of this class of machinery. *Three hours, second term.*

203. Central station appliances and distribution for lighting and power service by direct currents: This course treats in detail of switch boards and appliances, calculation of circuits of various kinds, arc and incandescent lighting, metering, systems of charging for service, economics of generating plants. *Three hours, third term.*

204. Elementary theory of electricity and magnetism: For non-electrical engineering students. This course is similar to course 201, though not so detailed in treatment. *Two hours, first and second terms.*

204a. The construction and operation of both direct and alternating current machines; tests for efficiency, regulation and heating; the generation and distribution of electric power. In this course, it is intended to cover the application of electricity to the operation of machinery. For non-electrical students. *Two hours, third term.*

205. Electrical measurements and tests: For students in electrical engineering and mechanical engineering. The course consists of lectures and recitations upon the measurements of current, voltage, resistance, capacities, magnetic measurements, stray power, brake tests, heat runs, and related subjects. *One hour, entire session.*

206. Laboratory work: For students in electrical engineering and mechanical engineering. The course consists of galvanometer work, resistance measurements of various kinds, magnetic measurements and various tests. *Four hours, first term.*

207. Laboratory work: For students in electrical engineering and mechanical engineering. The second term is devoted to the operation of direct current motors and dynamos, characteristics of direct current machinery, methods of adjusting, compounding, etc. *Four hours, second term.*

208. Laboratory work: For students in electrical engineering and mechanical engineering. Efficiency tests, location of troubles on machine and line, switch boards and appliances, and general experience in the operation of a direct current station, are given. *Four hours, third term.*

SENIOR CLASS.

210. Theory of alternating currents: Lectures, recitations, and problems upon the phenomena of alternating current circuits, inductances, etc. The course is introductory to the subject of alternating current machinery, and in order to take it, students must have a fair working knowledge of differential and integral calculus and vector algebra. *Five hours, first term.*

211. Alternating current machinery: Lectures and recitations upon alternating current generators, calculation of alternator voltage regulation by various methods, parallel running, transformers, induction motors, single phase commutator motors, synchronous motors, rotaries, etc.; harmonic analysis of wave forms, the expression of the same in Fourier series and calculation of the current produced in various circuits.

The course is somewhat advanced and in order to take it satisfactorily students must have a good knowledge of the mathematical theory of alternating currents. *Five hours, second term.*

212. Transmission lines: Lectures and recitations upon line inductance and capacity, the application of hyperbolic functions to the calculation of the regulation of long transmission lines, effect of harmonics in E. M. F. waves, surges, etc. Stresses in conductors, line construction and related topics. *Five hours, third term.*

213. Laboratory work: Operation of alternating current machinery, determination of data for calculation of alternator regulation, direct determination of regulation, efficiency tests, transformer connections, transformer testing for efficiency and regulation, induction motor testing, circle diagram. Brake tests, single phase induction motors, synchronous motors, V-

curves, rotaries, synchronizing, etc. The work during the third term consists chiefly in the determination of data for the student's thesis. *Four hours, entire session.*

214. Electric railway engineering: A detailed study of the subject of street and interurban electric railway service covering train resistance, grades, curves, line and track, car and power plant equipment, both direct and alternating currents, sub-station, single phase equipment, and related topics.

The course consists of recitations and lectures with constant reference to current numbers of various technical journals. *Two hours per week, one term.*

215. Telephone engineering: History and development of telephone types, designs of telephone parts, sub-station equipment, magneto and common battery switch boards, exchange equipment, telephone power plants, over head and under ground circuits, protectors, coin collectors and meters, party lines, private branch exchanges, first and intercommunicating systems, trunking, and toll boards. *Two hours, first and second terms.*

216. Telephone laboratory: Details of telephone constructions, association of parts, assembly of switch board parts, storage batteries, tests for location of faults in cables and lines, capacity and insulation tests, details of common battery and magneto switch boards, trunking schemes, etc. *Two hours, first and second terms.*

217. Electrical engineering: For senior mechanical engineering students. Direct current motors and generators, street railways, circuits, alternating currents, and alternating current machinery. This course is less detailed than the courses for electrical engineering students, but aims to cover the field in a more generalized manner. *Three hours, first term.*

218. Laboratory work: For seniors in mechanical engineering. This course is given in connection with course 217, and gives practice in the operation and testing of electrical machinery of various kinds. *Four hours, first term.*

219. Contracts and specifications: For seniors in the courses of electrical engineering and mechanical engineering. Lectures and recitations upon engineering specifications and the elements of the laws of contracts. Considerable time is devoted to exercises in writing specifications covering machinery and engineering projects. These specifications are read to the class and the students are required to offer criticism on each set. *Two hours, third term.*

220. Power plant: For students taking the special course in applied electricity. The purpose is to familiarize the stu-

dent with the operation of engines, pumps, generators, motors, switchboard appliances and boilers. All students in this course are expected to work under the power house engineer. *Four hours, entire session.*

WIRELESS TELEGRAPHY.

221. In response to a considerable demand it has been decided to offer a special course in wireless telegraphy. The practice work in this subject will be under the charge of a licensed wireless operator. Every effort will be made to offer to students opportunities to become familiar with the setting up, installation, and testing of wireless apparatus, as well as becoming expert in sending and receiving.

The requirements for entrance to this course will be similar to those for entrance upon the two-year course in applied electricity.

Wireless messages are constantly being picked up with the wireless station, these messages coming from ships at sea, and from various wireless stations along the Atlantic Coast.

The course of study is the same as that of the first year in the two-year course in applied electricity, with the exception that four hours of wireless telegraph study and practice will be substituted for four hours power house work.

MECHANICAL ENGINEERING.

PROFESSOR WILMORE.

INSTRUCTOR STOKES.

INSTRUCTOR HIXON.

INSTRUCTOR ASKEW.

ASSISTANT WEAVER.

ASSISTANT HAYNIE.

LABORATORY ASSISTANT BIBB.

LABORATORY ASSISTANT DAVIS.

The following courses are offered in this department:

FRESHMAN CLASS.

Students who have credit for a course satisfactorily completed in an accredited high school will be assigned to other work.

351. Shop work—carpentry: The lessons include instruction in the nature and use of tools; instruction and practice in shop drawing; elementary work with the plane, saw, chisel; the construction of different kinds of joints, timber splices, cross joints, mortise and tenon, mitre and frame work, and

dove tail work, comprising the different joints used in cabinet work, and examples of framing roof trusses. Students who have had previous experience in the use of tools or who show special proficiency, are given work of an advanced character. *Six hours, one term.*

352. Shop work—Wood turning: The instruction includes the nature and use of the lathe and tools, and the lessons comprise plain, straight turning, caliper work to different diameters and lengths, simple and compound curves, screw plates and chuck work, hollow and spherical turning. *Six hours, one term.*

353. Shop work—pattern making: The course includes work in whole and split patterns in wood for solid and cored castings, and core boxes for producing the necessary cores. The characteristics of the different kinds of timber used for patterns are studied, and attention is called to allowances necessary for shrinkage and draft. The patterns are intended to be used by the students in their subsequent work in the foundry. *Six hours, one term.*

SOPHOMORE CLASS.

312. Applied mechanics: Required of students in engineering courses. The fundamental laws of mechanical science are studied while special attention is given to the practical application of these principles to engineering work. *Three hours, second and third terms.*

361. Shop work—forging: A text-book is used from which is learned something of the characteristics of the metals and the best methods of working them. The lessons are so arranged as to make the student familiar with the handling of the tools and the successive steps in working metals by hand. Exercises in drawing, upsetting and bending, cutting, punching, and welding by various methods, are given, together with a course in steel forging, including hardening, tempering, and case hardening. *Four hours, first term.*

362. Shop work—foundry: Required of all students except those taking agri culture. The work for the most part consists of small articles, such as light machine parts and stock pieces used for the exercise work in the machine shop. A sufficient variety is introduced for the student to acquire a good general knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand and two part flasks, but some core work and more complicated work is introduced to illustrate the processes, as well as to furnish the castings for the advanced work in the machine shop. Instruction is given in operating the cupola,

and from time to time lectures and recitations are held on the metallurgy and working of the metals used in the industrial arts. *Four hours, second term and five hours third term.*

JUNIOR CLASS.

321. Practical mechanics: Required of students who take machine shop work. The instruction consists of recitations and lectures on general machine shop work. The construction, use, and limitations of the various machine tools, the forms of cutting tools and methods of grinding them, and the form and use of jigs and gauges, are studied, together with instruction in machine management, and time and cost keeping. *One hour, entire session.*

322. Strength of materials: Required of students in the engineering courses. The properties and characteristics of the materials of engineering construction are studied, and the development of the methods of calculating their strength under different conditions of stress is explained. Many problems involving the strength of beams, girders, columns, and shafts are worked out. *Three hours, second and third terms.*

371. Shop work: Required of students in the courses of mechanical engineering and electrical engineering. This work is divided into two parts:

(a) A course of chipping and filing. The lessons comprise work on cast iron and wrought iron, and consist in chipping to line on flat and curved surfaces, key seating, filing, and finishing to line, surface filing, slotting, pin and screw filing, and surface finishing with scraper.

(b) A course in machine work: The materials worked on include cast iron, wrought iron, steel and brass. Exercises are given in turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling in the lathe and drill press, reaming, boring, screw cutting in lathe and with taps and dies. Practice is given in working the planer, shaper, and milling machine. In the last part of the year, some work in tool making is given, such as making taps, reamers, and milling cutters. Some sort of construction or repair work for the department is always on the shop floor and students who are well advanced in their work have opportunity to gain additional practice and experience by assisting with this. *Six hours, entire session.*

374. Shop work: Required of students in the course of mining engineering and elective for juniors in the course of civil engineering. The work includes courses (a) and (b) as described in course 371 just preceding, except the amount of work required is less in proportion to the time consumed.

All shop work is done from blue prints and blackboard sketches. For the preliminary exercise work, special instruction sheets are prepared and given out to each student with the stock for the exercises. These sheets explain in detail each step in the process of producing the exercise, and are intended to supplement the individual instruction of the instructor. In the construction work it is the purpose to select some simple machine and build two or more of them on the interchangeable system. Jigs and templates are built to accomplish this result as far as possible. A system of time keeping is in force in the shop. At the end of the week each student makes out his time card, describing the work he has done during the week, and giving the number of hours spent on each job. *Four hours, entire session.*

377. Laboratory: Required of juniors in the courses of mechanical engineering and electrical engineering. The work will consist in the adjustment and calibration of instruments used in engineering work, and the adjustment and operation of gas, gasoline, and steam engines. Tests will be made to determine the efficiency of mechanisms, such as hoists, jack screws, gearing, belts and other transmission devices, together with some work in valve setting and power measurements of steam engine. Complete and accurate written reports of each experiment are required. *Two hours, third term.*

SENIOR CLASS.

331. Power plant engineering: Required of students in the courses of mechanical engineering and electrical engineering. The work of the course consists of a study of the practical applications of steam machinery. It is believed that a thorough knowledge of the apparatus in actual practical use is the best preparation a student can have for the study of the theory, and to that end, the different types of engines, boilers, pumps, condensers, and other auxiliary apparatus are taken up and studied in detail, and the advantages of each are discussed. Extensive files of manufacturers' catalogues are kept, and the technical papers and magazines in the library are freely used in order to keep in touch with the latest and best practice in engineering work. *Five hours, second half year.*

332. Thermodynamics: Required of students in the courses of mechanical engineering and electrical engineering. The subject is first studied from the ideal standpoint, and later the applications are made to hot air engines, gas and gasoline engines, and steam engines, and also to air compressors and refrigerating machines. The temperature-entropy method of analysis is used in explaining heat transfers, and in general,

graphical methods are used in preference to analytical ones when they can be made to serve the purpose equally well. In this course will be given instruction in indicator practice and the interpretation and working up of indicator diagrams from steam engines, gas engines, air compressors, and refrigerating machines. *Five hours, first half year.*

334. Heating and ventilating: The different methods of heating and ventilating buildings are treated. A study is made of the relative efficiency of hot water, steam, and warm air as mediums for heating different kinds of buildings, and special attention is given to the design and operations of healthful heating systems for residences. *Two hours, first term.*

336. Refrigeration: Required of students in the course in mechanical engineering. The theory of the refrigeration process is studied together with its applications to commercial plants. The advantages of the various mediums, as ammonia, carbon dioxide and others are discussed, as well as methods of insulation and plant arrangement. *Two hours, second and third terms.*

381. Laboratory: Required of students in mechanical engineering and electrical engineering. This work includes fuel analysis and heat determination, flue gas analysis and the study of combustion, oil and lubricant testing, and valve setting and indicator analysis. *Four hours, first term.*

382. Laboratory: Required of students in mechanical engineering and civil engineering and optional in electrical engineering. The course includes work in testing the strength of materials, as iron, steel, wood, and cement in tension, compression, and transverse loading, and the calibration of weirs, nozzles, and meters, a study of the flow of water in pipes, and the testing of hydraulic motors and pumps. *Four hours, second term.*

383. Laboratory: Required of students in mechanical engineering and electrical engineering. The work includes tests of engines, boilers, pumps, gas and gasoline engines, complete power plants, and when opportunity offers, tests of commercial power plants. *Two hours, third term.*

384. Thesis: Each applicant for a degree is required to prepare and hand in a thesis. This thesis may consist of a design, a study of some engineering problem involving a series of tests, or a study involving the collection and analysis of data and material on some engineering subject with a statement of definite conclusions derived therefrom. Preliminary work shall begin with the first term and weekly reports of progress made. The thesis proper shall be handed in to the professor

in charge not later than May 1. The student shall prepare and hand in two papers or reports on some portion of his thesis or some allied subject, approved by the professor, one during the first term and one during the second term. Credit as laboratory work. *Two hours, first and second terms, four hours, third term.*

GRADUATE STUDENTS.

391. Laboratory: This course is arranged to suit the work being carried by the students, and the hours are adjusted to suit their available time.

341. Steam turbines: The theory, design, and structural details of the different types of modern steam turbines are studied, and complete designs are worked out. *Three hours, first term.*

342. Power plant design and economics: The economics of power plant design, the relation of the different elements of a power plant to each other, and the conditions of maximum efficiency are studied. Plants are designed to give the highest efficiency under specified conditions, and actual plants are studied to discover, if possible, sources of additional economy in operation. *Three hours, third term.*

343. Works management: Methods of cost keeping, systems of organizing and paying labor, depreciation of plant, accounting and business organization are studied. Many problems are solved, including the lay out of buildings and machinery for manufacturing plants. *Three hours, third term.*

SPECIAL STUDENTS.

Special students who have the necessary preparation may be admitted to any of the classes in this department. For the benefit of students who, for any reason, are not able to remain in college to complete the full course, but who wish some training in drawing and shop practice, a special two-year course has been arranged. This course is particularly recommended to young men who contemplate entering the mechanical trades either preceding or following the apprenticeship period. In many cases this work has been accepted as equivalent to a part of the apprenticeship period and the time of the latter shortened thereby. The drawing and mathematics are invaluable tools in any of the trades, and work in the different shops enables the apprentice to become familiar with the principles of the trades allied to his own.

The following courses are offered to students in the special Two-Year Course in Applied Electricity, and to any other students who may desire to take them.

3S1. Steam engines and boilers: An elementary descriptive

course in which attention is called to the different types of engines and boilers, methods of setting, valve gears and valve setting, piping systems and auxiliary apparatus for power plants. *Three hours, first term.*

3S2. Gas engines: A descriptive course in gas, gasoline and oil engines; different cycles, methods of ignition, troubles and remedies. *Three hours, second term.*

3S3. Transmission of power: Shafting, pulleys, bearings, belting, gearing, aligning of shafting, calculation of pulley and gear sizes, power of belts, lubrication and lubricating systems. *Third term, three hours.*

3S4. Manual training for teachers: Courses in elementary wood work and iron work are offered. These courses will be adapted as far as possible to the individual needs of those taking the courses, and in addition to the shop work will include lectures and conferences on the organization of courses and the equipment of shops for manual training. *Hours to be arranged.*

MINING ENGINEERING AND GEOLOGY.

PROFESSOR BROWN.

ASSISTANT GILMOUR.

JUNIOR CLASS.

401. Mine surveying: All general surveying as given by the civil engineering department previous to the junior year is required for this course. The work covers general surveying methods as applied to conditions prevailing at mining properties, both underground and at the surface. The student is required to work out practical problems that he will be likely to meet in actual practice. *Five hours, first half of first term.*

Text-book: Durham's Mine Surveying.

402. Coal mining: For those who have taken course 401 and its prerequisites. This course includes the following:

Examination of coal properties; drifts, slopes and shafts; methods of working; plans of mines; coal-cutting machinery; trackwork; haulage; mine ventilation; coal washing; coking in beehive ovens; by-product coking. *Five hours from first mid-term to end of session.*

403. Junior drafting: The course includes free-hand lettering, mapping, detailed drawings to scale of various structures relating to mines, design of mine cars, design of ventilating fans. *Five hours, entire session.*

404. Summer course: The time will be divided between a study of gold mining and milling at Alexander City; coal min-

ing, washing, and coking at Birmingham, and iron ore mining at Birmingham. Surveys and reports will be required. *Four weeks immediately following commencement between junior and senior years.*

SENIOR CLASS.

411. Mining: Modes of occurrence and origin of the various ores and economically valuable mineral deposits. Prospecting and examination of mineral properties, including boring by different methods. Methods of opening up mineral deposits, breaking ground, supporting excavations, developing and working coal and metalliferous deposits, haulage, hoisting, drainage, ventilation, lighting and provisions for ascent and descent. The last term is devoted to the design of mine structures such as head frames (timber and steel), coal tipples, mine buildings. *Three hours, entire session.*

412. Drafting: Map work consisting of the plotting of notes taken on summer trip between junior and senior years; drafting accompanying design of mine structures; original work in connection with thesis. *Four hours, entire session.*

413. Laboratory course: For seniors in mining engineering and chemistry and metallurgy. The work includes crushing, sampling, concentration, stampmilling, amalgamation and cyaniding. *Three hours, entire session.*

Text-books: Coal and Metal Miner's Pocket Book, and International Text Books.

421. Graduate course: This course is offered to those who desire to pursue the subjects related to mining beyond the scope to which the two years' course limits them. The work will be arranged to meet the requirements of those desiring to take it.

GEOLOGY.

JUNIOR CLASS.

431. Crystallography: For students in the courses in civil engineering, mining engineering, and chemistry and metallurgy. A thorough study is made of the crystal systems with the aid of a full set of crystal models and natural crystals. Special emphasis is laid upon the more practical features which will be of service in further mineralogical work. *Four hours, first mid-term.*

Text-book: Bayley's Elementary Crystallography.

432. Mineralogy: For juniors in the courses of civil engineering, mining engineering, and chemistry and metallurgy. The course consists of a thorough study of a large number of

minerals from the standpoint of their physical characteristics. A good type collection of minerals is kept in the laboratory for comparison. An effort is made to have the student become familiar with economically important ores and non-metallic minerals, and the common rock-forming minerals so that he can identify them at sight by the application of a few simple tests. *Four hours, one and one-half terms.*

Text-book: Butler's Handbook of Minerals.

433. Lithology: For those who have satisfactorily completed course 432. This deals with the combinations of minerals in the make-up of rocks, and aims to bring out structure, texture, crystallization and mineralogical composition sufficiently to enable the student to recognize the commoner rocks in the sedimentary, igneous and amorphous classes. *Four hours, third term.*

Text-book: Kemp's Handbook of Rocks.

434. Agricultural geology: For juniors in agriculture. This course deals with the structure, composition and other characteristics of the different classes of rocks; the general principles involved in rock-weathering; special cases of rock-weathering; transportation and redeposition of rock debris; classification and character of resulting soils. *Two hours, second and third terms.*

Text-books: Merrill's Rocks, Rock-Weathering and Soils.

435. General geology: See course 441.

436. Engineering geology: The rock forming minerals; the general characters, mode of occurrence and origin of rocks; structural features and metamorphism of rocks; rock-weathering; surface waters; underground waters; landslides and their effects; wave action and shore currents; lakes, their origin, and relation to engineering work; glacial deposits, their origin, structure and economic bearing; building stone; limes, cement and plaster; clay and clay products; coals; petroleum, natural gas and other hydrocarbons; road foundations and road materials; ore deposits. Required of special students in mining engineering. *Two hours, entire session.*

SENIOR CLASS.

441. General geology: For juniors in the course of mining engineering, and chemistry and metallurgy, and for seniors in the courses of civil engineering and general course. The course covers dynamic geology, structural geology, geomorphology, and historical geology in the order named. The lectures and recitations are supplemented by laboratory instruction and geological excursions. *Two hours, entire session.*

Text-book: Chamberlain and Salisbury's College Geology.

442. Economic geology, non-metallic minerals: For seniors in the courses in mining engineering, and chemistry and metallurgy. The course is presented by lectures and recitations and includes the study of modes of occurrence, distribution, origin and uses of coal, petroleum, limestone, salines, gypsums, fertilizers, abrasives, minor non-metallic minerals and mineral waters. *Two hours, first term.*

Text-book: Riess' Economic Geology of the United States. (Revised.)

443. Economic geology, metallic minerals: For students who have taken course 442. The work includes a study of the ores of iron, copper, lead, zinc, gold, silver, silver-lead, aluminum, manganese, mercury, and the minor metals. *Two hours, third term.*

Textbook: Reiss' Economic Geology of the United States. (Revised.)

444. Methods of teaching physical geography: Especially adapted to the secondary schools of the State. In the course in general geology will be found much that is especially applicable to physical geography. It takes up a study of subterranean and surface agencies both as to their destructive and constructive processes. The results of these processes are then taken up in a study of the topography of the surface of the earth and under the following heads: The geographic cycle; land sculpture; topography as determined by faults and joints; adjustment of rivers; sea coasts; mountain ranges. Students desiring extra work in this subject may arrange for a three-hour course. *Two hours a week, first and second terms.*

ARCHITECTURE.

PROFESSOR HUDNUT.

ASSISTANT MONTGOMERY.

The department of Architecture was established in June, 1907, to comply with an increasing demand for instruction in this subject and to encourage students to take up a profession which hitherto could be pursued only after an expensive term of study in the North.

The course as planned leads to the degree of B. S. in architecture after a period of four years' study, of which the first is devoted to those preliminary courses required of freshmen in all departments, while the other three are devoted partly to those technical courses which form the foundation of an architect's training and partly to certain cultural subjects

which, though less obviously necessary, are nevertheless essential.

The curriculum recognizes the fact that only a part of an architect's training can be obtained in class room and laboratories; a large part must be obtained by experience in the offices of practicing architects. The immediate aim of the school is not therefore to give the student a complete knowledge of all the materials and processes of building nor yet to give him complete mastery of all the subtleties of architectural drawing and design. The aim is rather to give him that wide sympathy with intellectual culture which ought to distinguish the successful architect, and at the same time to give him a clear understanding of the more fundamental technical principles of his profession. In addition the student will acquire as great a facility in drawing as can reasonably be expected after three years of daily practice.

The following courses are required of all students in this department:

SOPHOMORE CLASS.

501. Architectural drawing and design: An introductory course in simple architectural elements (the orders and their application) precedes the study problems in design which occupy the major part of the sophomore, junior and senior years. This work in design is conducted under the rules and the programs of the *Society of Beaux Arts Architects*. Students are expected to earn not less than nine "points" credit during the three years spent in the study of design. *Ten hours, entire session.*

521. Building construction: This course consists of two parts: First, a theoretical study of building materials and methods, and, second, actual practice in making working drawings, specifications, and details. The first year's work is concerned largely with carpentry of all kinds, especially in connection with the construction of frame buildings. Lectures and quizzes, supplemented by two afternoons each week in the draughting room. Text-books: *Martin's Details of Building Construction* and *Kidder's Building Construction and Superintendence*. *Seven hours, entire session.*

511. Freehand drawing: Elementary exercises in drawing from plates, casts, and natural objects, in pencil and wash. *Four hours, entire session.*

JUNIOR CLASS.

502. Architectural drawing and design: A continuation of course 501. The *Analytiques* and *Projets* of the *Society of*

Beaux Arts Architects. Lectures on the theory of design. *Ten hours, entire session.*

522. Building construction: A continuation of course 521. A study of building materials in theory and practice. The second year is devoted to mason's work (brick, stone, concrete, etc.), and to the mechanics of building construction. Texts: Kidder's *Building Construction and Superintendence* and Adams' *The Mechanics of Building Construction*. *Seven hours, entire session.*

512. Freehand drawing: Charcoal drawing from casts. Drawing in wash from plates and natural objects. *Four hours, entire session.*

532. History of architecture: A technical and historical study of the development of architecture from the earliest times to the fall of the Roman Empire. The work is carried on by means of lantern-slide lectures supplemented by research in the library. Essays on specified topics, with sketches and tracings. *Four hours, entire session.*

SENIOR CLASS.

503. Architectural drawing and design: A continuation of course 502. The *Projets* of the *Society of Beaux Arts Architects*. Lectures on the theory of design. *Fourteen hours, entire session.*

513. Freehand drawing: Practice in water color drawing from plates, natural objects, and from artificial objects. Outdoor sketching in last term. *Four hours, entire session.*

533. History of architecture: A technical and historical study of the architecture of the Renaissance in Italy, France, England, and the English colonies in America. Lectures, library research, and essays. *Four hours, entire session.*

MACHINE DESIGN AND MECHANICAL DRAWING.

PROFESSOR FULLAN.

ASSISTANT PROFESSOR THOMAS.

ASSISTANT GAMMAGE.

ASSISTANT FINCKEN.

The following courses are offered in this department:

FRESHMAN CLASS.

601. Mechanical drawing: This course in drawing is of general educational value, and is required of students in all courses. The object of the course is to train the mind through the eye and hand with the applications of geometry to drawing.

Accuracy, neatness, and the correct use and the care of instruments, are given special attention.

The work is given in the following order:

- (1) Freehand drawing and freehand lettering.
- (2) Linear drawing—geometrical construction.
- (3) Orthographic projection, sections, and intersections.
- (4) Development of surfaces and the construction of models.
- (5) Isometric, Cavalier, and dimetric projections.
- (6) Study of working drawings, making tracings and blue prints.

(7) During the third term, in lieu of (5) above, a course in agricultural drafting is given freshman students in agriculture and is arranged for the purpose of assisting them to a knowledge of the principles of mechanical drawing and their application to the farm. The course consists of drawings in the following lines of work:

(a) Farm maps: topographical drawing; topographical conventions; maps and plots; layout for farm buildings, outhouses, and grounds.

(b) Building construction: Plan, elevation, and section; details, framing joints; building materials; layout of plumbing and water supply on the farm; plans for barns, hayracks, and roof construction; and framing for houses, etc.

(c) Concrete forms: simple forms; steps and stair forms; wall forms; layout of forms for silo building; watering troughs and fence posts.

Freehand drawing of geometrical subjects is given early in the course. It provides training of a certain definite nature by developing close observation and accuracy in representing the forms of models used in the work. Freehand lettering of standard practice is strongly emphasized throughout the entire course. The construction and application of Roman and Gothic capitals and small letters to working drawings and the arrangement and design of formal titles are treated in this division.

Under the head of linear drawing, special attention is given to the proper use and care of instruments. The most useful of the geometrical constructions are worked out in pencil and afterwards carefully inked.

Orthographic projection with sections and intersections is given in the beginning of the second term and is a prerequisite to course 602 in descriptive geometry. Developments of surfaces are made and paper models of the objects are constructed from these developments. The construction of these models has the property of more firmly fixing the principles involved

in the preceding division in the mind of the student and is given special attention.

In the third term pictorial representations of objects are given by means of single-view projections, isometric, cavalier, and dimetric. The paper models made by the pupil are now used for subjects. A number of working drawings of familiar objects are required in the last part of the year. Penciled drawings to scale, tracings, and blue prints of these objects are made by each member of the class. *Five hours, entire session.*

SOPHOMORE CLASS.

602. Descriptive geometry: Required of all students preparing for engineering and architectural courses. The work is given by lectures, written recitations, and drafting room instruction. In this course, theory and practice are combined with the purpose of training the student in the graphical expression of ideas. The instruction includes problems relating to the point, straight line, and plane; tangents and normals; to cylindrical, conical, and warped surfaces, to sections, intersections, and developments; to shades, shadows, and perspective; and is intended to develop in the mind of the student a clear concept of magnitudes in space. The lectures and written recitations are to impart principles and to permit the instructor to meet the entire class, and, with diagrams and models, supplement the work of the text. The drawing, two hours per week, consists of plates of problems, which are selected from the text-book and other sources. *Four hours, entire session.*

JUNIOR CLASS.

604. Kinematics of machinery: Required in the courses of mechanical engineering and electrical engineering. Under this head, machines are analyzed and their elementary combinations of mechanism are studied. Motions and velocities, instantaneous centers, kinematic chains, velocity diagrams, parallel and straight line motion mechanisms, are given early in this course. The communication of motion by means of gear wheels, belts, cams, screws, and link work, and the different ways of obtaining definite velocity ratios and definite changes of velocities in machine parts are investigated. Problems in designing quick return motions, trains of mechanisms for various purposes, and gear trains, are treated. Illustrated lectures with the lantern, showing practical applications of mechanism to the design of machinery, are given at intervals throughout the course. *Three hours, first term.*

605. Graphic statics of mechanism: Required in course of

mechanical engineering. The lectures provide a brief course in graphic statics, graphical statics of mechanism, and in the design of structures, including roof trusses for factory buildings, crane frames, girders, and water-tank towers. The stresses in machines and structures are investigated by graphical methods, which are carefully checked in the beginning, by analytical proofs. This course includes the solution by graphical methods of such problems, before which analytical methods are comparatively impotent, as those which involve the friction losses in machines, and of the determination of the efficiency of mechanisms. The graphical method is also applied to dynamics by problems in the balancing of engine crankshafts working under specified conditions. The use of manufacturers' handbooks and drafting-room practice are given special attention. *One hour, entire session.*

606. Machine design: Required in the courses of electrical engineering and mechanical engineering. Instruction is given in the design of fastenings and machine parts, and in the general methods of arranging views. This course includes the design of cams, gear tooth outlines, quick-return motions, and link-work combinations, which supplements course 604, in kinematics. Scale drawings of simple machines are made from dimensioned sketches, which each student makes for himself from an actual machine or model. Tracings and blue prints are made from these drawings. All the instruction is intended to familiarize the students with modern drafting-room methods. *Four hours, entire session.*

SENIOR CLASS.

607. Machine design—lectures: Required in the courses of mechanical engineering and electrical engineering. These lectures are intended to cover the general instructions to the students, such as the selection of materials for different machine parts, the rules for proportion of parts to secure strength, symmetry, and cheapness of manufacture, and the best methods of making, recording and preserving the calculations incidental to the design of a complete machine. Much valuable engineering data of current nature in the form of notes are given as a supplement to the text-book. Illustrated lantern lectures on subjects related to the course are given at intervals during the year. *One hour, entire session.*

608. Machine design—drawing: Required in the course in mechanical engineering. This is a continuation of the junior course in machine design. Original problems involving the design of complete machines to work under specified conditions are assigned and the student develops the idea in the

form of sketches. These are submitted to the instructor for criticism and are afterwards embodied in complete detail and assembly drawings. The calculations of each design are written up neatly and filed with the drawings. Special attention is given to the strength of the parts, to the harmonious and symmetrical appearance of the complete machine, and to the details as regards practical manufacture. *Six hours, entire session.*

609. Machine design—drawing: Required in the course in electrical engineering. The work given and the methods pursued are similar to those described in course 608, just preceding, but the amount of work required is reduced in proportion to the amount of time given to the subject. *Three hours, entire session.*

GRADUATE STUDENTS.

610. The work offered during the post-graduate year is an extension of that of the senior year. More of the theory of the subject is taught, more intricate machines are involved, and problems are given involving the design of a series of machines for manufacturing some specific article. The problems arising in the design of a line of machines of different sizes are also taken up, including the applications of graphical methods and the use of factors of enlargement and reduction. Special attention is given to the effect of current practice on the proportion of machine parts.

A research study into the Patent Office records of some machine or device is offered in this course. This feature is to develop the inventive capacity of the student, and is given special attention.

Suitable text and reference books are used.

611. Methods of teaching drawing and descriptive geometry: A course in the methods of teaching drawing and descriptive geometry is given to those who wish to prepare for teaching these branches. This course includes advanced work in shape of problems, supplemented by frequent conferences with the instructor, a full bibliography of works on the subjects, and an extended course in reading.

Those who desire to avail themselves of an opportunity to practice the teaching of the subjects may be permitted to attend the meetings of the large classes in elementary work for the purpose of observing methods of teaching.

Those who show sufficient preparation may be allowed to

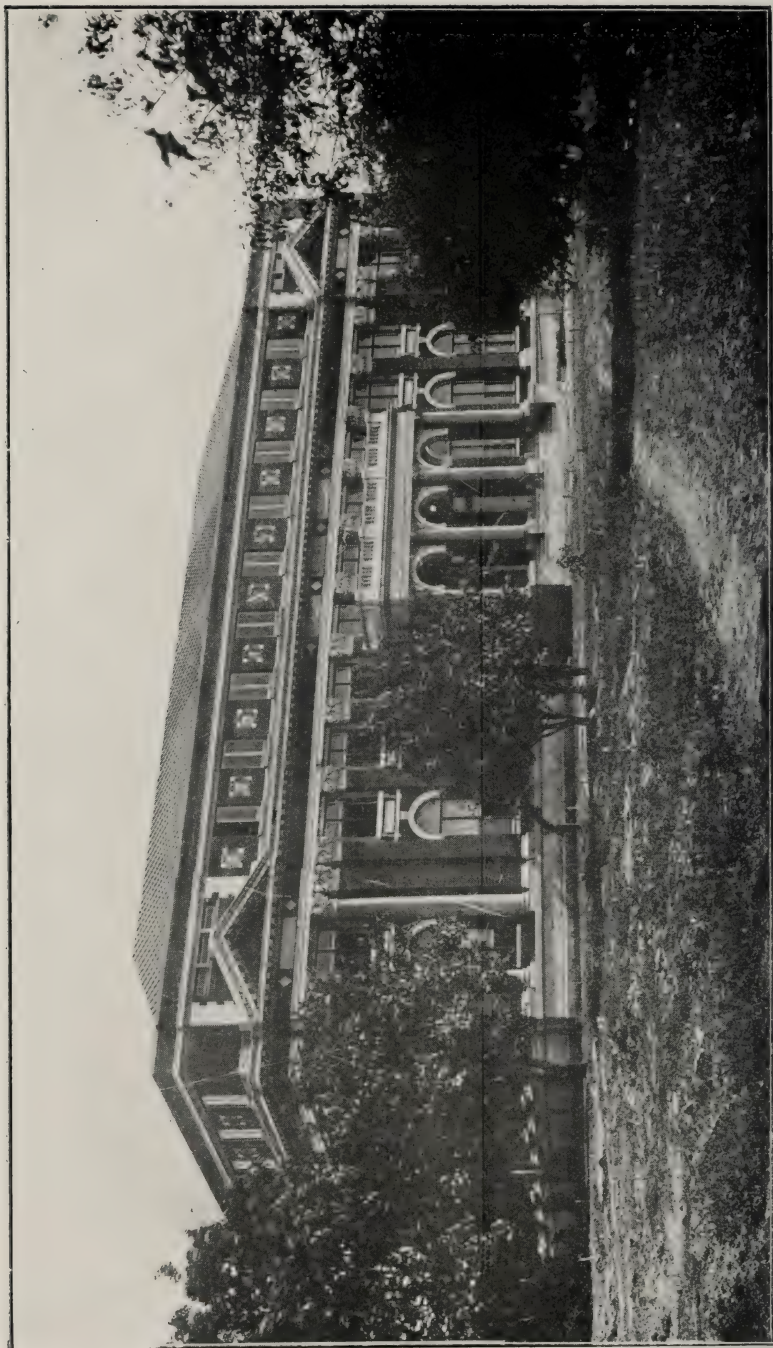
assist in tutoring delinquent students and those who enter conditioned.

Special attention is given to the subject of drawing as taught in high school work.

612. Thesis: A thesis taken in this department may be a study of some machine or its parts; research in records of subjects relating to the work of the department; or, a study of current practice in the design of some specific machine. It is required to be written in parts, one of which is to be presented at the end of each term. The complete thesis is due on May 1st.

TEXT-BOOKS.

Cross' Mechanical Drawing, Jamieson's Isometric Drawing, Phillips and Millar's Essentials of Descriptive Geometry, French's Engineering Drawing, Keown's Mechanism, Spooner's Machine Design, Smith and Marx's Machine Design, Cathcart and Chaffee's Graphics, Halsay's Hand-book Machine Design.



Comer Agricultural Hall

COLLEGE OF AGRICULTURAL SCIENCES

CHEMISTRY.

PROFESSOR ROSS.

PROFESSOR HARE.

ASSOCIATE PROFESSOR BRAGG.

ASSISTANT PROFESSOR POWELL.

INSTRUCTOR MARSH.

ASSISTANT MARTIN.

ASSISTANT PIPKIN.

ASSISTANT BASORE.

Instruction in this department embraces the following courses of lectures, systematic laboratory work being given in connection with each course for the practice of chemical analysis and chemical research:

FRESHMAN CLASS.

101. Course in general chemistry: This consists of a series of lectures including a discussion of the fundamental principles of chemical philosophy in connection with the history, preparation, properties, and compounds of the metallic and non-metallic elements, with the main facts and principles of organic chemistry. In this course the more common applications of chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and approved improvements necessary for presenting the subject in the most attractive and instructive form. *Four hours, entire session.*

REFERENCE BOOKS.

McPherson and Henderson's General Chemistry, Newth, Holleman, Smith, Mellor, Chemical Journals.

SOPHOMORE CLASS.

103 (b). Organic chemistry: This course, though somewhat more condensed, is similar to 103 (a), with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins with reference to their functions in the life processes of plants and animals. *Three hours, first and second terms.*

105. Agricultural chemistry: This course consists of lectures on chemistry in its application to agriculture and includes a thorough discussion of the origin, composition, and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of

soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock, and the various operations carried on by the intelligent and successful agriculturist. *Four hours, third term.*

REFERENCE BOOKS.

Snyder's Soils and Fertilizers, Snyder's Chemistry of Plant and Animal Life, Johnson's How Crops Grow, and How Crops Feed, Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Stoddart's Agricultural Chemistry, Storer's Agriculture in Relation to Chemistry, scientific journals, reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign agricultural departments and stations.

JUNIOR CLASS.

102. Industrial chemistry: Lectures, including discussion in detail of the processes and chemical principles involved in the most important applications of chemistry, in the arts and manufactures to the preparation of materials for food and drink, for clothing, shelter, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufactured products, together with models and diagrams. *Three hours, first and second terms; four hours, third term.*

REFERENCE BOOKS.

Thorp's Industrial Chemistry, Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Sadtler's Industrial Organic Chemistry, Blount and Bloxom's Chemistry for Engineers and Manufacturers.

103 (a). Course in organic chemistry: Instruction in this subject embraces lectures and recitations upon the leading facts and principles of the chemistry of the carbon compounds, and includes a study of the methods of preparation of the more important compounds, their properties, and their structural and stereo-chemical relations. *Three hours, first and second terms; two hours, third term.*

TEXT AND REFERENCE BOOKS.

Remsen's Organic Chemistry, Richter's Organic Chemistry, Gatterman's Practical Methods of Organic Chemistry.

SENIOR CLASS.

104. Course in Metallurgy: This consists of lectures and

recitations upon the more important metals, such as iron and steel, copper, lead, tin, silver, gold, mercury, zinc, etc. It includes a discussion of the physical and chemical properties of the metals and their alloys, the ores and their treatment, and the processes by which the metals are obtained from the ores, with chemical reactions involved. *Three hours, second and third terms.*

104b. Metallurgy: An advanced course in iron and steel. Lectures and recitations upon the special methods of manufacturing iron and its several alloys, or steels. Required of seniors in mining engineering, chemical engineering, chemistry and metallurgy, and mechanical engineering. *Three hours, third term.*

106. Engineering chemistry: A course given during the senior year, especial attention being devoted to the study of the construction and equipment of the chemical plants devoted to the manufacture of the more important chemical products. Excursions to various chemical and metallurgical plants during the course of the year will aid in familiarizing the student with the practical details of the operation of the leading industries. *Two hours, second and third terms.*

107. Course in theoretical chemistry: The more modern phases of chemical theory are given special attention. *Two hours, first term.*

108. Course in physical chemistry: Lectures and recitations. *Two hours, entire session.*

109. Methods of teaching chemistry in the secondary schools: In this course, students who have had the necessary preliminary work in chemistry will be afforded the opportunity of taking laboratory practice in experimental chemistry for lecture purposes and for the purpose of the practical study of methods of handling classes in experimental laboratory work. Advanced students can also take the course in the history of chemistry which is provided in the senior year of the course of chemistry and metallurgy. *Hours to be arranged.*

111. Course in advanced inorganic chemistry: *Two hours per week, entire session.*

LABORATORIES.

110. Courses of practical work in the laboratory are carried on in connection with all courses of lectures.

The laboratories, which are open from 9 A. M. to 5 P. M. during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation in qualitative and quantitative analysis, and in the methods of prosecuting chemical research. Unusual facilities are offered to stu-

dents who wish to devote their time to the special study of practical chemistry.

Each student on entering the chemical laboratory is furnished with a work table, a set of re-agent bottles and the common re-agents and apparatus used in the qualitative and quantitative analysis.

At the close of the session he will be credited with such articles as may be returned in good order; the value of those which have been injured or destroyed will be deducted from his contingent fee.

SOPHOMORE CLASS.

(a) All students in the courses in agriculture, chemistry and metallurgy, chemical engineering, and mining engineering are required to take practical laboratory work. Students in the course in pharmacy upon application, may be allowed to take this work.

The work of this course embraces the preparation of a number of non-metallic elements and some of the more important inorganic compounds, the identification of metals by means of the blowpipe, and the qualitative separation and detection of the bases and acids.

JUNIOR CLASS.

110 (b). A course in quantitative analysis, embracing gravimetric and volumetric analysis and including the analysis of limestones, iron ores, etc. *Six hours, entire session.*

SENIOR CLASS.

(c). A course in quantitative analysis, including analysis of fertilizers, soils, coals, ores, iron and steel, sugars and sugar products, feed stuffs, mineral waters, fluxes, slags, cinders, furnace gases, etc. The nature of the work is varied somewhat to suit the individual object of the student. *Six hours, entire session.*

(d). The laboratory course provided for students in the course in mining engineering embraces work in quantitative analysis, including assaying. In the latter portion of the course, especial attention is given to metallurgical analysis and the fire assay of ores of gold, silver, and other important metals. *Eight hours, entire session.*

(e). In the courses in pharmacy and veterinary science, instruction in urine analysis and in toxicology and toxical analysis is given during the last term.

(f). In the junior year, a laboratory course in organic chemistry is provided for students in the course in chemical engineering throughout the entire year, and for students in the

course in chemistry and metallurgy during the third term.
Four hours, entire session.

The short course includes systematic laboratory work in organic preparations, while the longer course embraces work in organic analysis, as well as in preparations.

112. In addition to the laboratory work above described it is designed to give a short course of laboratory work in industrial chemistry, in which the student will apply upon a small scale the principles involved in the processes of some of the more important chemical industries.

Students completing the above courses are afforded ample facilities for advanced work along special lines.

AGRONOMY.

PROFESSOR DUGGAR.

ASSOCIATE PROFESSOR FUNCHESS.

INSTRUCTOR BOYD.

The regular agricultural course extends through four years and is intended to prepare those who complete it to become successful farmers, farm superintendents, and agricultural scientists in the various divisions of agricultural work in the U. S. Department of Agriculture and the numerous agricultural colleges and experimental stations. The studies in the regular agricultural course are so arranged that a student may obtain a thorough education while acquiring the technical training necessary to the most successful management of farming operations and of agricultural investigation or teaching. No foreign language is required for graduation in this course, but those who expect to engage in scientific work of the U. S. Department of Agriculture or of the agricultural colleges and experiment stations, have the opportunity to study Latin, French and German, or any one or two of these.

For the benefit of those who are unable to spend four years at college and who desire to prepare for the management of a farm, a short two-year course in agriculture is provided. In this the student devotes his entire time to those studies having a direct bearing on his future occupation.

The following courses of instruction are offered:

FRESHMAN CLASS.

201. Introduction to agriculture: This is a short course of lectures, dealing with some of the simplest phases of agriculture. *Two hours, half first term.*

SOPHOMORE CLASS.

202. Corn: Lectures, recitations, and field practice on the cultivation, judging and improvement of corn. The student assists in harvesting certain experiments, becomes acquainted with a number of the best varieties, learns to select the best ears and the best plants, and notes the results of experiments in improving or breeding corn. *Two hours, lectures; two hours, laboratory, first term.*

203. Farm accounts: *Lectures and practice, two hours, second term.*

204. The small grains: Lectures, recitations, and field practice on wheat, oats, rye and barley. These plants are treated both as grain crops and as forage plants. *Two hours, lectures; two hours, laboratory, third term.*

JUNIOR CLASS.

205. Leguminous forage plants and soil improvement: Lectures, recitations, and field practice on this most important group of forage plants, including cowpeas, soybeans, alfalfa, the clovers, vetches, etc. These plants are treated both with reference to their use as forage plants and as a means of improving the soil. *Two hours, lectures; two hours, laboratory, third term.*

SENIOR CLASS.

206. Cotton: Lectures, recitations, and field practice in identifying and comparing a large number of varieties growing on the experiment station farm; judging individual cotton plants, and lectures on the cultivation, fertilization, and improvement of cotton. The collection of varieties growing on experiment station farm usually numbers between fifty and one hundred varieties, and all of these are available for students' use. *Two hours, lectures, two hours laboratory, first term.*

207. Cotton classing: This course of laboratory work consists of practice in classing the commercial grades of cotton by comparing great numbers of samples procured from the offices of cotton buyers with a nearly complete set of type samples owned by this department. A part of this practice will be under the supervision of experienced cotton buyers. *Hours by appointment.*

207a. Special crops: A course of lectures dealing with sugar cane, tobacco, rice, broom-corn, and other southern crops not treated in other courses. *Two hours, second term.*

208. Farm management: A course of lectures and practice dealing largely with rotation of crops, cost of producing differ-

ent crops, systems of farming, selection of a farm, and plans for the best use of the farm or soil in which each student is most interested. This course is intended to give the student an opportunity to bring to bear on practical problems the information acquired from preceding courses of instruction in agriculture and related subjects. *Two hours, lectures; two hours, laboratory, third term.*

209. Investigation as a basis for a thesis: After a month spent in special reading under the direction of the professor of agriculture with a view to the selection of a subject for a thesis, the student will perform some agricultural experiment in crop production, soil treatment, or in testing farm machinery. Suitable facilities for such thesis work are provided in the fields and agricultural laboratories. In addition to conducting an original experiment the student will review the literature of agriculture to ascertain the results of similar or related experiments. It is expected that the results of some of these experiments will be worthy of publication. *Entire session.*

211. Soils and soils laboratory: Recitations intended to acquaint the student with the physical properties of soils, with the principal soils of Alabama, and especially those of the region from which each student comes. Instruction in this course will be given with a view to fitting a student to engage in the soil survey work of the U. S. Department of Agriculture, as well as to prepare him for the rational management of the soil of the farm. *Five hours, entire session.*

212. Methods of teaching agriculture: This is a course of lectures and laboratory and field exercises intended to meet the needs of those who expect to teach agriculture or nature study in the common schools and agriculture in the high schools. Special attention is given to the selection of material for illustrating the principles of agriculture, and practice will be given in conducting a number of simple demonstrations. Frequent excursions are made in the fields. *Two hours, third term.*

Post graduate courses in crop production, soils, and farm management are offered. The exact nature of the subject will depend upon the special requirements of the student.

Students taking a four-year course in agriculture receive instruction in the various branches of animal husbandry and horticulture, as well as in the natural sciences bearing on agriculture.

COURSES FOR SPECIAL STUDENTS.

213. Soils and fertilizers: (For special students only)—This

is a lecture course in which the student is made familiar with the origin, chemical and physical properties, and management of the soil. A discussion of the relation of rotations, fertilizers, and lime to the maintenance of soil fertility is given. *Two hours, first and second terms. Tu., Th. 8-9.*

214. Terracing and drainage: (For special students only)—Field instruction is given in this course with the view of fitting the student to lay off terraces and design drainage systems on the farm. *Two hours, second term. F. 10-12.*

AGRICULTURAL ENGINEERING.

PROFESSOR BLASINGAME.

INSTRUCTOR BOYD.

JUNIOR CLASS.

220. Drainage, terracing, and farm structures: While these topics are the subjects of lectures and recitations, chief stress is laid on giving the student practice in locating terraces, laying out ditches, and planning systems of tile drainage. Such time as is available is given to the study and planning of barns, fences, gates, etc. *Two hours lectures, two hours laboratory, first term.*

SENIOR CLASS.

221. Farm engines: This course consists of lectures and laboratory practice with farm engines; application of power to farm operations, such as feed grinding, silage cutting, pumping, spraying, wood saws, etc.; transmission of power, including belt lacing, rope splicing, etc. Especial attention is given to finding and remedying engine troubles. *Two hours per week, second term.*

222. Farm machinery: It is the aim of this course to acquaint the student with improved farm machinery; adjustment, construction, repair, and operation of preparation machinery, seeding machinery, cultivators, haying machinery, etc. *Two hours per week, second term.*

BOTANY.

PROFESSOR ROBBINS.

ASSISTANT PROFESSOR MASSEY.

The courses offered by the Department of Botany are designed to meet the needs of three different groups of students: Those desiring to secure some general acquaintance with the

elementary facts and principles of a biological science as a necessary part of a cultural education; those desiring a thorough and detailed presentation of certain aspects of the subjects as a prerequisite to entrance upon the study of medicine or of some phase of applied botany such as horticulture or agronomy; those seeking the fullest possible collegiate training in the subject as a preparation for teaching or for advanced work in the subject. For information as to laboratory equipment see page 18.

SOPHOMORE CLASS.

301. General botany: This course is planned to meet the needs of all three classes of students just named. It is designed to furnish a broad general introduction to the fundamental principles of a biological science, supplying the foundation upon which subsequent courses are built while at the same time giving to the non-specialist a good acquaintance with those biological principles which should form a part of his equipment for life. The course is not rigidly morphological, but attempts to supply an introduction to the evolutionary history and the fundamental physiological processes of organisms, employing plants as illustrative material. The first half of the year is devoted to the general morphology of selected representatives of the Cryptogams. The evolutionary relationships of the great plant groups will be outlined in the lectures and illustrated by the study of types in the laboratory. About forty carefully selected type forms will be studied in detail, while a considerably larger number will be examined in a comparative way. Especial stress will be laid upon the life-histories and biological relationships of those forms which are of greatest economic importance, hence a considerable proportion of the time will be given to the fungi. The second half of the year will be devoted to the general morphology of the flowering plants. The topics upon which especial stress is laid are: vascular anatomy, the histological elements, and recognition by chemical and microchemical tests of the commoner stored food substances. Secondary attention will be devoted to elementary physiological principles and facts and to the correlation of these with the facts of anatomical structure, but the chief end of the course is to convey a knowledge of the principles of morphology. Required of all sophomores in the college of agriculture. A laboratory fee of \$1.50 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures and four hours laboratory, entire session.*

302. Pharmaceutical botany: This course is designed to

supply such knowledge of the facts and principles of botany as are prerequisite to the special work of students in pharmacy. The first portion of the course is devoted to a systematic presentation in lectures and laboratory of the fundamental principles of anatomy and physiology of the higher plants, followed by detailed microscopical and microchemical examination of the more important histological elements and food substances of plants. Considerable attention is devoted to the methods, microscopical and chemical, employed in the examination of crude drugs and the detection of adulterants. The third term is devoted to the study of the principles of classification; a description of the work done in this part of the course will be found under course 307. Required of sophomores in the course in pharmacy. A laboratory fee of \$1.50 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures and four hours laboratory, entire session.*

JUNIOR CLASS.

303. Agricultural bacteriology: This course is designed to supply to students contemplating specialization in animal husbandry or in some phase of applied botany, as horticulture, forestry, or agronomy, such an introduction to the principles of bacteriology as may furnish a basis for study of the special problems to be encountered in these lines of work. After a brief introductory discussion of the general morphology and physiology of the bacteria, the biological relations of the specialized groups will be taken up. The bacteriology of fermentation and putrefaction, the nitrogen-fixing and sulfur bacteria, the application of bacterially produced processes in the industries, and the more important problems of soil bacteriology will be dealt with in such detail as time permits. The point of view throughout the course is distinctly economic. The forms pathogenic for man and for animals will not be considered. A prerequisite for this course is Agr. 301. A laboratory fee of \$2.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures, four hours laboratory, first term.*

304. Plant Physiology: This course deals with the fundamental processes involved in plant response and plant behavior as related to crop production. The topics covered in the lectures and laboratory are the following: The cell as the physiological unit; the principles of absorption; transpiration and water movement in plants; water requirements of economic plants; mineral nutrition; the carbon relations of plants; the relation to nitrogen; the products of metabolism; digestion and

translocation; respiration, aeration, and fermentation; growth; reproduction; the relation of plants to temperature, light, and toxic agents; variation and heredity. A prerequisite for this course is Agr. 301. A laboratory fee of \$3.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lecture, four hours laboratory, second and third terms.*

SENIOR CLASS.

305. Plant pathology: The lectures of the first half of the course will deal with the morphology, distinguishing characters, and methods of identification of those orders of fungi which are concerned in the production of economically important plant diseases. The relations of parasite to host will be studied through the employment of a few examples of each of the categories of plant disease—parasitism immediately destructive to tissues and life of host; symbiosis terminated by destruction of the host at the reproductive period; invasions which do not involve destruction of living tissues—to the end that the student may acquire some degree of ability to make diagnoses of plant diseases. Habit studies in the field will be followed, so far as possible, by cultural studies in the laboratory, employing representatives of all the more important pathogenic orders. Each student will be required to collect and classify a considerable number of pathogenic fungi. The second half will deal with those diseases of farm, garden, and truck crops which are of most interest to agriculture and horticulture in the state. The lectures will consist for the most part of a review and discussion of the more important literature, with especial reference to prevention and control. The laboratory work of this portion of the course is designed to give the student an acquaintance with pathological technique and with field methods through the combination of field studies with cultural and morphological studies of assigned organisms in the laboratory. These problems may form the basis for thesis work or for investigation which may be continued through the year. Prerequisites for this course are Agr. 303 and 304. A laboratory fee of \$2.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures, four hours laboratory, first and second terms.*

306. Plant histology: This course covers a rather broader field than the title would imply, as its purpose is to furnish to students planning to become teachers or advanced students of botany, such familiarity with the collection, preservation, and preparation of the materials ordinarily used in introduc-

tory botany as will enable the student to collect and prepare materials for study or to do intelligent and effective teaching. The technique of the more widely used methods of preserving, sectioning, and staining will be taught, and the student will be directed in the collection and preparation of a representative teaching collection, including permanent gross and microscopic preparations of representative forms ranging from the lower Algae through the flowering plants. Such materials become the property of the student, who will pay actual costs of reagents, glassware, and breakage. The lectures will give consideration not only to general histological technique, but also to the choice and methods of presentation of illustrative material in elementary courses in the subject. A prerequisite for this course is Agr. 301. *Two hours lectures, four hours laboratory, second term.*

307. Taxonomic botany: This course is intended to meet the needs of students desiring to acquire some acquaintance with the flora of the region. The work demands some such knowledge of the general morphology of the flowering plants as is supplied by course 301 or its equivalent. The student will be instructed in the use of keys and manuals, and the lectures will deal with the classificatory characters of the more important plant families. The laboratory work will be to a considerable extent adapted to the especial needs of the student, so that those who desire to pay particular attention to special groups, as an adjunct to work in horticulture or agronomy, will find an opportunity to do so. Required of sophomores in pharmacy and juniors in veterinary medicine. *Two hours lectures, four hours laboratory or field, third term.*

GRADUATE COURSE.

The department offers to properly prepared students opportunity for advanced work in botany, particularly in plant physiology and pathology. Students planning to do graduate work should consult with the head of the department as early in the course as possible, preferably at the beginning of the junior year, in order that proper choice of the electives may be made. The general requirements for graduate work in the department are: the satisfactory completion of the undergraduate courses in botany, together with the required courses in organic and agricultural chemistry, courses in plant breeding and forestry (Horticulture 609 and 608), and a fair reading knowledge of German and French. By special arrangements with the department head, a student may begin graduate work without having fully met these requirements, with the understanding that they are to be fully met prior to serious entrance

upon his work in the department and in addition to the work in botany required for the Master's degree.

TEXT-BOOKS.

- 301. Coulter, Barnes and Cowles' Textbook of Botany, Volume I.
- 302. Stevens' Plant Anatomy, Third Edition.
- 303. Marshall's Microbiology.
- 304. Hass and Hill, Introduction to the Chemistry of Plant Products; Duggar's Plant Physiology; Jost's Plant Physiology.
- 305. Duggar's Fungous Diseases of Plants.
- 306. Chamberlain's Methods in Plant Histology.
- 307. Gray's School and Field Botany, revised edition.

DEPARTMENT OF PHARMACY.

PROFESSOR BLAKE.

ASSISTANT MOTLEY.

ASSISTANT GENTRY.

The pharmacy department of this institution is a member in good standing of the American Conference of Pharmaceutical Faculties.

The practical work in pharmacy includes the manufacture of not less than two hundred pharmaceutical preparations and the compounding of not less than fifty prescriptions.

The work in pharmacognosy includes the study of more than 250 drugs, each of which the student is required to recognize by its physical and chemical properties, giving Latin name, common name, origin, habitat, constituents, medicinal action and dose.

JUNIOR CLASS.

401. (a). Pharmacy: Metrology; specific gravity; heat and applications of heat; fundamental operations of pharmacy; apparatus used in pharmaceutical processes; pharmaceutical arithmetic. *Three hours, first term.*

(b). Pharmaceutical laboratory: Preparation of official and non-official galenicals, including the following classes of preparations: waters, spirits, liquors, mucilages, pills, elixirs, oleates, tinctures, etc. *Two hours, lectures, six hours laboratory, second and third terms.*

402. Pharmacognosy: The study of crude drugs; lectures, recitations, and practical work in identification. *Four hours, entire session.*

406. Pharmaceutical chemistry: A study of the official

salts, official title, chemical formula, reactions, description, physical identification, dosage, etc. *Three hours, second and third terms.*

SENIOR CLASS.

403 (a.) Pharmaceutical technique and manufacturing pharmacy: official and non-official galenicals and chemical preparations; a thorough study of the U. S. P. and N. F. class work. *Three hours, entire session.*

(b.) Manufacture of more difficult galenicals and U. S. P. chemical preparations. *Twelve hours, first term.*

(c.) Pharmaceutical testing and drug assay. *Nine hours, second term.*

(d.) The compounding of fifty or more prescriptions and individual instruction. *Six hours, third term.*

(e.) Food and drug analysis. *Six hours, third term.*

404. Pharmacognosy: The study of crude drugs. This course is a continuation of course 402. *Three hours, first term.*

405. Prescription reading and incompatibilities: Lectures and recitations. *Three hours, second and third terms.*

407. United States Pharmacopoeia: This course is primarily a review intended to prepare the student to stand the State examinations. It covers all crude drugs, organic and inorganic chemicals and preparations found in the U. S. P. *Three hours, second and third terms.*

THREE-YEAR COURSE.

408. The work of the third year for the pharmaceutical chemist degree is elected from the following courses:

(a.) An advanced course in the manufacture of galenicals and organic and inorganic chemicals used in medicine.

(b.) A course in the testing of drugs and medicinal chemicals for impurities by pharmacopoeial methods.

(c.) A course in pharmaceutical assaying, including the assay of alkaloidal drugs, glucosidal drugs, resinous drugs, the valuation of fixed and volatile oils, pepsin, diatase, etc.

(d.) A course in water analysis.

(e.) A course in milk and butter analysis.

(f.) A course in physiological chemistry.

(g.) A course in organic preparations.

(h.) An advanced course in toxicological analysis.

(i.) The presentation of a satisfactory thesis.

(j.) Food and drug analysis.

Any student who completes the work of the three-year course in such a manner as to prove himself a competent analyst will be granted the degree of Pharmaceutical Chemist.

TEXT AND REFERENCE BOOKS.

Arny's Principles of Pharmacy, Steven's Pharmacy and Dispensing, Kraemer's Botany and Pharmacognosy, Caspari's Treatise on Pharmacy, Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacognosy, Scoville's The Art of Compounding, Beal's Prescription Practice, Dorland's Pocket Medical Dictionary, Ruddiman's Incompatibilities in Prescriptions, O'Connor's Commercial Pharmacy, Lyon's Pharmaceutical Assaying, United States Pharmacopoeia, United States Dispensary, National Dispensary, National Standard Dispensary, King's American Dispensary, Prescott's Organic Analysis, Allen's Commercial Organic Analysis, Pharmaceutical Journals, Reports of American Pharmaceutical Association.

HORTICULTURE.

PROFESSOR WALKER.

ASSOCIATE PROFESSOR PRICE.

Instruction in this subject begins with the third term of the sophomore year and continues through the junior and senior years for students taking the regular four-year course in agriculture. A special two-year course in horticulture and related subjects is open to students who are unable to take the regular four-year course.

Practical exercises in the laboratory and field supplement the lectures and recitations. Constant attention is given to the fundamental principles and science upon which the best in practical methods is based.

SOPHOMORE CLASS.

601. Principles of plant culture: This includes the study of germination, propagation, transplanting, conditions of plant growth, etc.; also seed testing, preparation and sowing of seed beds. *Recitations, two hours, third term. W. 11-12; Th. 10-11.*

Plant propagation: (to accompany 601): Laboratory practice in seed testing, propagation of plants, pruning, etc. Students are required to submit illustrated notes. *Laboratory and field, four hours, third term. M., F. 2-4.*

Text-books: Principles of Plant Culture (Goff), and The Nursery Book (Bailey).

JUNIOR CLASS.

602. Landscape gardening: An introduction to the general subject of landscape design. The trees, shrubs, vines, peren-

nials, and annuals adapted to southern gardens are studied. Individual problems are presented for the embellishment of the home and school grounds, and plans for public squares and parks are studied. *Lectures, two hours, first term, Tu., Th. 10-11.*

Text-books: Landscape Gardening (Maynard). References Landscape Gardening (Waugh); Modern Civic Art (Robinson); The Landscape Beautiful (Waugh); Weidenmann and other authors.

603. Vegetable gardening: Studies of the principal truck and garden crops with notes as to their origin, classification and economic importance; methods of growing, fertilizing, harvesting, marketing, and storing these crops. *Recitations and lectures, two hours, laboratory, two hours, second and third terms; second term, Tu., F. 11-12, Th. 2-4; third term, Tu., F. 11-12, W. 2-4.*

Text and reference books: Garden Farming (Corbett), Vegetable Gardening (Bailey), Up-to-date Truck growing in the South (Davis), Vegetable Gardening (Vilmorin), Southern Gardener's Manual (Newman), Vegetable Gardening (Watts).

604. Orchard technique: A laboratory course in spraying, pruning, fertilization, cultivation, and orchard management, supplementing course 603. *Two hours, second term. Tu. 2-4.*

References: The Pruning Book, Bailey Farm and Garden Rule Book (Bailey).

SENIOR CLASS.

605. Fruit growing: A study of the more important fruits and nuts of the United States with special reference to their cultivation in home plantings and commercial orchards, harvesting, grading, packing, marketing, leading varieties for the several sections. *Recitations and lectures, three hours, entire session, laboratory two hours, first and third terms. M., W., F. 9-10; laboratory first term, F. 2-4; third term, Tu. 2-4.*

Text and reference books: Principles of Fruit Growing (Bailey) 20th revised edition. Fruit Harvesting Storing and Marketing (Waugh), Citrus Fruits (Coit), The Pecan (Hume), Citrus Fruits and Their Culture (Hume), Systematic Pomology (Budd and Hansen) and (Waugh), The American Fruit Culturist (Thomas).

606. Canning: Studies in the canning of the different fruits and vegetables. *Lecture one hour, laboratory two hours, first term, Tu. 8-9 and 2-4.*

607. Floriculture: This course briefly covers the subject of greenhouse construction and management with special reference to growing of the leading vegetables and decorative plants

with discussions on the forcing and marketing of vegetables and cut flowers. *Lecture one hour, laboratory two hours, second term. Tu. 8-9 and 2-4.*

608. Forestry: An elementary course, embracing a study of the forest conditions in Alabama, care of woodlots, preservation of wood, and the uses of the different southern woods. *Recitations and lectures, three hours; laboratory and field exercises two hours, second term. Tu., Th. 10-11; W. 12-1; laboratory M. 2-4.*

Text-books: Elements of Forestry (Moon and Brown), First Book of Forestry (Roth), Practical Arboriculture (Brown), Primer of Forestry (U. S. D. A.), Principles of Handling Woodlands (Graves), Economics of Forestry (Fernow), Principles of American Forestry (Green), Shade Trees in Towns and Cities (Solotaroff).

609. Plant breeding: A study of the improvement of plants, theories and laws of plant breeding, the origin of the choice varieties of garden and farm crops. *Lectures and recitations two hours, third term. Tu. and Th. 8-9.*

Text and reference books: Principles of plant Breeding (Gilbert and Bailey), Plant Breeding (Davenport), The Mutation Theory), Species and Varieties (DeVries).

610. Thesis: Students who expect to make their major work in horticulture are required to select a thesis subject not later than October 1st.

ENTOMOLOGY.

PROFESSOR HINDS.

ASSISTANT PROFESSOR THOMAS.

701. Zoology: A general course in zoology is required of sophomore students in agriculture, and of special students in agriculture during their second year. The course is given in the first and second terms and includes a brief discussion of the relation of animals to plants and minerals, the nature of cells, the functions involved in life processes and of the classification and distribution of animals. The different animal groups are studied, beginning with the single celled animals, and leading gradually to the most complex forms. The characteristics distinctive of each group are shown and an illustrative study is made of one or more typical representatives of the principal subdivisions in these groups.

Hegner's "College Zoology" is the textbook used. This is supplemented by lecture notes, and the work illustrated by microscopic mounts of protozoa, both fresh and stained, mi-

microscopic mounts showing cell structures of various tissues, alcoholic specimens, dried specimens, charts and models. *Lectures, three hours; laboratory two hours, first and second terms.*

Entomology: In accordance with the catalogue requirements the work in Entomology is taken by all senior students electing an agricultural group of courses, and by the special two-year agricultural students during their second year. In addition to this senior work the subject is open to post-graduate students, who have completed the senior course satisfactorily, as an elective course leading to the degree of Master of Science. The senior work is given during the fall and spring terms only, while the postgraduate work continues during the college year. In general the instruction is given by lecture courses supplemented by collateral reading as assigned and with appropriate laboratory and field exercises.

The senior courses are designed to familiarize the students who anticipate engaging in agricultural work with the most important general facts of entomology as an educational science and with its importance as a subject having wide economical application. So far as possible in the brief time available, they are made familiar with some of the most common insect pests, and with general methods of insect control. Particular emphasis is given to the importance of insect species in their effects upon health of domestic animals and of man especially. A foundation is laid during this year for post-graduate study which may fit men to fill some of the many attractive openings in this field which are quite rapidly multiplying in the South.

Excellent accommodations for the department are now provided on the first floor of Comer Hall. The combined lecture and laboratory room provides accommodations for sixty or more men. In connection with the range of greenhouses there is also a large workroom for experimental and demonstrational work with insecticides and an insectary, 16x40 feet, within which the study of insect problems may be conducted at any time under controllable conditions.

A text-book is required to supplement the lectures in this subject, and reference publications are at all times available to the student. The lectures are also supplemented by appropriate laboratory work, field exercises, the insect collection, photographs, etc., belonging to the department.

702. Structure and development of insects: The general relation of insects to other animals, showing their origin, distinguishing characteristics and the principal structures upon

which they are classified, are here considered. A general study is made of the structure and physiology of insects relating to fundamental principles in their life, habits, and reproduction. The most important points in the collection, mounting and preservation of insect specimens are also studied.

703. Ecology of insects: Under this heading are considered some of the most important and interesting of entomological subjects, among which are the general relation of insects to the health and welfare of mankind through the transmission of preventable diseases and the production of articles having a large commercial value. Protective devices of insects and their control through exceedingly complicated but important natural factors are among the subjects considered.

704. Important injurious and beneficial insects: As full study as the limited time permits is made of the pests of greater economic importance in the household, the orchard, garden, and greenhouse, the enemies of field crops, stored products, etc. Under beneficial insects a series of lectures is given on bees and beekeeping. Excellent opportunity for demonstration of practical methods in modern beekeeping is afforded by the college apiary.

705. Methods in insect control: The principles of insecticide preparation and application are explained and illustrated. This work is supplemented by an exhibit of the principal insecticide materials. Practice in the preparation of the most commonly used materials is given to emphasize proper and desirable methods. The best types of spraying apparatus are shown and tested, and the student is familiarized with many of the special points in practical work. The importance of the improved methods of agricultural practice is shown and the logical basis of their effectiveness is explained. *Lectures three hours; laboratory two hours, first and third terms.*

ANIMAL HUSBANDRY.

PROFESSOR TEMPLETON.

ASSOCIATE PROFESSOR FERGUSON.

ASSISTANT GIBSON.

Instruction in this department is given in the class room, in the laboratories, and upon the animal husbandry farm with the live stock. While lectures are given on judging animals, the instruction does not stop with the lectures; the students are taken to the barn and feed lots where the animals are placed before them and each student is required to make a

written report concerning the animals. Class-room work in dairy instruction is supplemented, strengthened, and made practical by requiring each student to work in the dairy laboratory where butter is made, where the Babcock test is used, where the lactic acid in cream is determined, etc. In the senior year, trips are made to cities, state and county fairs, and farms to study live stock judging and management. The live-stock provided by the college for the students' use in studying breeds and judging consists of pure-bred herds of Jersey and Hereford cattle; Duroc-Jersey, Berkshire, and Poland-China swine. Light horses and mules are available for class work.

The department now has the complete herd books of practically all the leading breeds of live stock in America. By the use of these the student is enabled to inform himself in regard to all pedigrees and to study the different scales of points which the breeders have adopted to represent the highest types of the various breeds. All class room instruction is given by means of text-books and lectures. Many of the lectures are illustrated by the use of a balopticon.

The courses in this department may be grouped under five main heads:

(1) Judging of live stock, (2) breeding of live stock, (3) feeding of live stock, (4) management of live stock, (5) dairying.

The student is given an opportunity to specialize in animal husbandry throughout the junior and senior years. The courses are as follows:

FRESHMAN CLASS.

801. Breeds of live stock: The object is to study the origin, history of development, the characteristics of each one of the leading breeds of live stock, and to discuss special adaptability of each breed to Southern conditions. The lecture work is supplemented, as far as possible, by representative animals of the breed under discussion. *Lectures, two hours, latter half of first term, M., W. 11-12.*

SOPHOMORE CLASS.

802. Judging beef cattle: The object of this course is to make the student familiar with the various classes and grades of cattle recognized by the leading stock markets and to familiarize him with the leading beef breeds. Instruction is given by lectures, the use of the score card, and by comparative judging. *Laboratory, two hours, first term, M. 2-4.*

803. Judging dairy cattle: The student is familiarized with the dairy types and breeds, and is given judging instruction by the employment of the same methods as used in beef cattle

judging (802). *Laboratory, four hours, second term, M. 2-4, W. 4-6.*

JUNIOR CLASS.

804. Dairying: The study of the secretion, character, composition, and production of milk, is made; proper methods of handling milk and cream for consumption, pasteurizing, sterilizing. The students are given thorough work in using the Babcock test and the lactometer, and the lactic acid test, together with the ordinary tests for the purity of milk and its adulterants. They are also drilled on all the phases of butter-making and standardizing milk and cream. Familiarity with the construction, care, and operation of the leading makes of cream separators, and other dairy equipment, is required. *Lectures, two hours; laboratory, two hours, first term, Tu., Th. 9-10; W., Th. 2-4.*

805. Swine judging: Considerable time is given to the study of the market classes of grades and the leading breeds of lard and bacon types of hogs adapted to southern conditions. The lecture work is followed by the students using the score card and doing comparative judging. *Laboratory, four hours, second term, W. 2-4, Th. 9-11.*

806. Sheep judging: The student is instructed in the methods of judging sheep, considering the market classes and grades, and the characteristics of the principal breeds. *Laboratory, two hours, third term, Th. 2-4.*

806. (a). Advanced stock judging: This course is for junior agricultural students who are especially interested in live-stock judging, and is a prerequisite to making the intercollegiate stock judging team. No college credit is given. *Hours to be arranged, latter half second term and the third term and first half following fall term.*

SENIOR CLASS.

807. Principles of animal breeding: The lectures of this course will embrace the principles and practices involved in the improvement of the domestic animals. The subjects of reproduction, variation, selection, heredity, line breeding, in-breeding, cross-breeding, grading-up, etc., will be discussed in their relations to practical breeding problems. *Lectures, two hours, first term. M., W. 8-9.*

808. Advanced feeding: This course consists of lectures, supplemented by reference reading, upon the most profitable methods of producing, finishing, and marketing, pork, beef, and mutton. The various concentrates and roughages are discussed as to their importance and efficiency as feeds for

horses, mules, and dairy cattle. *Lectures, three hours, entire session, M., W., F. 10-11.*

809. Meats: This consists of a study of the structure and composition of meats, quantity, cost and food value of the various cuts of beef, mutton, and pork; exercise is also given in judging the carcasses of the different classes of animals. A study is made of how the home-dressing and home-curing of pork is carried on. Lectures are given upon the effect of feeding and breeding of the different animals as affecting the value of the carcass and the quality of the meat. *Laboratory, two hours, second term, F. 2-4.*

810. Poultry: In this course an effort is made to acquaint the student with the different types of poultry with relation to their use and value on the farm. Instruction is given also in feeding, managing, housing, and judging poultry. *Lectures, two hours, third term, M., W. 8-9.*

811. Judging horses and mules: Lectures and laboratory work are given in the judging of the various classes of horses and mules which are adapted to Alabama conditions. *Laboratory, two hours, second term, F. 2-4.*

812. Live stock management: The raising of horses, cattle, sheep, and swine as a business, is discussed in full detail, featuring the care and management in production and marketing. A study is made of the methods used by the most successful stock farmers. Practical work is given in preparing stock for shows and sales. This course will be limited to and required of students majoring in animal husbandry. *Lectures, one hour; laboratory, two hours, entire session, Tu. 11-12; 2-4.*

813. Herd book study: This includes a study of the various herd books with the view of becoming familiar with the pedigrees of the leading strains and families of the different breeds of livestock. Emphasis is made on the methods and rules of registration for each of the breeds of livestock. The rules and regulations governing the importations of livestock into the United States and into Alabama, together with the rules and regulations governing the moving of livestock within the United States and Alabama, are studied. *Lectures, two hours, second term, M., W. 8-9.*

814. Dairying: This course is outlined to meet the requirements of the senior veterinary students and is similar to course 804. *Lectures, one hour; laboratory, two hours, second term, F. 11-1.*

SPECIAL TWO-YEAR COURSE IN AGRICULTURE.

FIRST YEAR.

815. Dairying: A separate course in this subject giving special attention and instruction for the benefit of the two-year students in agriculture, is maintained. The student is familiarized with the butter fat tests, the use of the lactometer, determination of the lactic acid in milk, churning, cream separation, etc. Practice is also given in determining the various common adulterants of milk. *Lectures, two hours; laboratory, four hours, first term, W., F. 8-9; Tu., Th. 2-4.*

816. Livestock feeding: This course is offered for the benefit of the first-year veterinary students and the first-year special agricultural students. The food requirements of the animals' bodies are briefly considered. All through this course the practical, rather than the scientific side of feeding is emphasized. Special reference is made to feeding horses and dairy cattle. Veterinary students are allowed to discontinue this subject at the middle of the second term. *Lectures, two hours, entire session. First term, Tu. 8-9; Th. 10-11; second and third terms, M., Th. 8-9.*

817. Live stock management: This course, also, is for the first-year veterinary students and the first-year special agricultural students. It consists of a series of lectures on the care, housing, and management of horses, cattle, swine, and sheep. *Lectures and laboratory, three hours, latter half of second, and the third term, Tu. 10-11; W. 2-4.*

818. Dairy cattle judging: The second term is devoted to judging dairy cattle, in the place of the course in dairying. A detailed study of the several different breeds of dairy cattle is made, and their chief distinctive characteristics pointed out. Exercises in practical judging are given by the use of the score card and by comparative judging at the barns. *Laboratory, four hours, second term, Tu., Th. 2-4.*

819. Judging beef cattle: In this course the student is familiarized with the leading breeds of beef cattle and a study of the conformation of each type is made by practical judging. *Laboratory, two hours, third term, Tu. 2-4.*

SECOND YEAR.

820. Judging horses and mules: A special course of judging is maintained for the second year special students in agriculture. The various types of horses and mules and the market classes are studied. Representatives of the different classes are brought before the students who are, by detailed study,

given an opportunity to become thoroughly familiar with each of them. *Laboratory, four hours, first term, M., W. 10-12.*

821. Poultry: This course in poultry consists of the study of the types and breeds; the housing, feeding, and caring for all classes and ages. From time to time hours are spent in judging. *Lectures, two hours, first term, M., F. 12-1.*

822. Swine judging: This course is a continuation of the course of judging begun in the second year by the study of horses and mules. The leading breeds of swine are kept at the station barns, and the student has ample opportunity to become thoroughly familiar with each. The difference in function and conformation between the lard and bacon types, and the scrubs or natives, is pointed out. A study is made in practical judging by the use of the score card and by comparative judging. *Laboratory, four hours, second term, M., W. 2-4.*

823. Meats: This course includes a study of the effects of various feeds on the meat and lard of hogs, and other animals; finishing stock for slaughter; slaughtering; dressing and curing of the meat. In the laboratory work the student is required to put into practice the methods taught. *Lecture, two hours; laboratory, two hours, second term, Tu. 9-10; F. 12-1; 2-4.*

824. Principles of breeding: A course of study of the principles of breeding live stock, giving special attention to the problems of the practical breeder. Much attention is given to fecundity, in-breeding, cross-breeding, grading up, and inheritance. Variation; its causes and benefits are studied. *Lectures, two hours, third term, Tu. 8-9; F. 12-1.*

825. Sheep judging: A course is given to make the student thoroughly familiar with the leading breeds of sheep, their conformation and uses. *Laboratory, two hours, third term, F. 10-12.*

SCHOOL AGRICULTURE.

JUNIOR AND HOME ECONOMICS EXTENSION
DEPARTMENT.

L. N. DUNCAN.

MADGE J. REESE.

J. C. FORD.

I. B. KERLIN.

* MARY PAXTON.

This department was created July 1, 1914, and is a part of the agricultural extension work conducted in Alabama by co-operation between the College and the United States Department of Agriculture.

The special lines of work in this department are as follows:

- Organization of boys' corn clubs,
- Organization of boys' pig clubs,
- Organization of girls' canning clubs,
- Home demonstration work for farm women,
- Movable schools of agriculture.

* In co-operation with the Alabama Girls' Technical Institute, Montevallo, Alabama.

COLLEGE OF VETERINARY MEDICINE AND SURGERY

By direction of the United States Civil Service Commission and Department of Agriculture, this college has been added to the list of accredited veterinary colleges, and placed in class A.

VETERINARY MEDICINE AND SURGERY.

PROFESSOR CARY.

ASSISTANT PROFESSOR MCADORY.

INSTRUCTOR WEBB.

INSTRUCTOR FERGUSON.

INSTRUCTOR PRITCHETT.

LECTURER BAHNSEN.

LECTURER WHITE.

PHYSIOLOGY AND VETERINARY SCIENCE.

101. Physiology: The students in the special agricultural course, in all of the pharmacy courses, in the course in chemistry and metallurgy, and in the three-year course in veterinary medicine and surgery, all study elementary physiology.

The aim of this course is to teach anatomy, histology, hygiene, and sanitation. The instruction is given by lectures, demonstrations, and text-book. Text-book, Martin's Human Body. (Advanced). *Two hours, entire session.*

102. Veterinary science (elective): For students in agriculture. Lectures and chemical work in the junior year. In the senior year, the student may elect, with the consent of the professor in charge, six hours in the regular three-year veterinary course. The aim of the instruction given to the agricultural students is to teach such lessons as will enable them to prevent many diseases on the farm by correct hygiene and sanitation. At the same time they will be instructed in the ways and means of treating and handling the common diseases of farm animals. This work will prepare them for the "first aid" treatments and emergencies as well as for the course in veterinary medicine and surgery. *Five hours, junior year; six hours, senior year.*

VETERINARY MEDICINE AND SURGERY.

The three-year course in veterinary medicine and surgery leads to the degree of Doctor of Veterinary Medicine. It is the outgrowth of fifteen years' work of the department of



Veterinary Laboratory

physiology and veterinary science. Moreover, it has been established to meet the demand of the young men of the South who desire to become educated veterinarians, and for students who desire to prepare for the study of human medicine.

EQUIPMENT.

The main veterinary building has an independent gas plant and a connected sewer system. It is supplied with electric lights and water. The building contains an office, two lecture rooms, a physiological laboratory, and a museum on the first floor; on the second floor, are located two research laboratory rooms, a library and reading room, a large lecture room containing an incubator room, and all the necessary apparatus for pathological, histological, and bacteriological work.

A separate building is used as a house for small animals (rabbits, guinea pigs, pigeons, etc.) that are employed for experimental and demonstration work in bacteriology, histology, and physiology.

The anatomy division has a separate one-story brick building with good ventilation and extensive sky light. It is supplied with gas, water, and electric lights. The anatomy museum contains the skeletons of man, the horse, the ox, the sheep, and the pig, and models of limbs and special organs of man and the horse. It is also supplied with different lots of bones of the horse with dissected and dried limbs showing the relation and attachment of muscles. An hexagonal operating pavilion thirty-six feet in diameter has just been completed. It is supplied with water and electric lights and lockers for students.

The veterinary hospital contains five box stalls, four open single stalls, an office, and feed room, on the first floor; a large room for storing hay, fodder, and feed, is found on the upper floor. The veterinary department has for its exclusive use about six acres of land divided into lots, pens, and paddocks. In one of the lots, are located two large sheds having a capacity for accommodating one hundred and twenty-five cattle or large animals. These sheds are used for tick fever inoculation purposes and for isolation of animals affected with infectious diseases.

HOG CHOLERA SERUM PLANT.

The hog cholera serum plant occupies about twenty-five acres of land southwest of the College grounds. Upon this are located a large two story brick and cement serum building (70 x 30), a brick and cement virus building (30 x 36), and a large hog barn (60 x 100) with cement floor. The rooms in

the virus and serum buildings are sufficiently large to admit students in the veterinary medical and agricultural courses for instruction in inoculating hogs and in the various processes in making virus and serum. Some of the veterinary medical students work every day in the serum plant and thus become conversant with sterilizing, bleeding, hypering, inoculating and handling the virus, the serum and the hogs.

COURSES OF STUDY.

The three-year veterinary course students take five terms of work in the department of animal husbandry and dairying, one-half years' work in pharmacy; four terms of work in the chemical department, one term of work in botany and one year's work in English. The facilities and equipment of these departments are excellent.

The veterinary course is especially strong in practical laboratory work.

1. In anatomy the work of dissection is continued through the first and second years and the first term of the third year. It is a well established fact that useful surgical or real anatomy can not be acquired without careful and thorough work in the dissecting room. Special stress is given to comparative anatomy of the horse, ox, sheep, pig, and dog.

2. Clinical laboratory work is also required throughout the course. The clinical work comes six days in the week and the cases presented embrace mules, horses, cattle, sheep, dogs, poultry, and hogs. The variety is such as to illustrate a large number of diseases, surgical operations, and therapeutic applications.

3. The physiological laboratory is supplied with apparatus for tests and experiments in physiology.

4. The laboratory for pathology, histology, and bacteriology is extensive, and is fully fitted with the latest apparatus. This laboratory has been the outgrowth of twenty years of cumulative additions. The aim is to teach students to work in the laboratory rather than to memorize the printed page of the text-book.

5. In chemistry and toxicology the students work in one of the best of chemical laboratories.

6. In pharmacy, the students work in practical pharmacy for five hours a week for a half-year. In this they learn to recognize compounds, and dispense drugs.

7. The animal husbandry department affords ample facilities for practice in feeding and judging cattle, sheep, hogs, and mules.

8. The dairy department gives practical laboratory work in

dairy operations and in handling and feeding dairy cattle.

9. The botanical department is well equipped and gives excellent opportunity for laboratory work.

10. The subjects in the course of study are such as are required in the leading veterinary colleges of America. The course meets the requirements of the American Veterinary Medical Association and the Bureau of Animal Industry and United States Civil Service Commission. It is the aim to have the teaching staff meet the requirements of the best standards. The length of the course is three years of nine months each.

FIRST YEAR.

103. Human physiology: Elementary human physiology. The instruction is given by lectures, demonstrations, and textbooks. *Two hours, entire session.*

104. Histology: Deals with the minute anatomy of the various tissues. It includes methods of fixing, imbedding, sectioning, mounting, staining, and a microscopical study of the tissues. Histology is studied by lectures and by laboratory work. *Five hours, first and second terms.*

105. Embryology: This is a study of the development of the embryo and is designed to prepare the students for the study and practice of obstetrics. *Five hours, third term.*

SECOND YEAR.

106. Veterinary physiology, recitations: Treats of the actions or functions of the various vital organs of the animal body. Attention is also given to the laws of health and the conditions most favorable to the healthy action of the animal body. *Two hours, first and second terms.*

107. Physiology laboratory: A part of the course deals with chemical physiology and the vital processes of the organs of the domestic animals. *Two hours, third term.*

108. Bacteriology: The principles of bacteriology and chief pathogenic organisms are carefully studied. *Three hours in class room and three in laboratory, first term and first half of second term.*

109. Pathology: This deals with the general pathological anatomy and histology as observed in man and different species of animals, and a study of the cellular changes in diseased tissues and organs. *Three hours recitations and three hours in laboratory, last half of the second term and entire third term.*

110. Obstetrics: Practical work is given as cases are presented. *Two hours, first and second terms.*

111. Special surgery: This includes surgery of the head,

eye, neck, chest, limb, skin, abnormal organs, urino-genital system and castration. It consists of lectures supplemented by practical operations. *Two hours, second and third terms.*

Botany: A study of medicinal and poisonous plants. *Six hours, third term.*

THIRD YEAR.

112. Surgical exercises: In these exercises the student is required to perform the principal surgical operations. *Two hours, second term.*

113. Infectious diseases: This is a study of the diagnosis and preventive sanitation of the animal plagues. *Two hours, first term; three hours, second term.*

114. Parasites: This subject deals with the parasitic infestations of man and animals. An abundance of material is available. *Two hours, second and third terms.*

115. Meat inspection: Embraces recitations, lectures, and abattoir inspections in the smaller and larger cities of the State. *Two hours, first and second terms.*

116. Milk inspection: The course includes the study of milk adulterants, sanitary construction of dairy barns and dairy houses, conditions of cows and the diseases of dairy cattle; the feed, the water supply, the dairy cans, bottles and wagons, the diseases and filth germ of milk. *Three hours, third term.*

117. Urinalysis: This course is largely laboratory work. *Three hours, third term.*

118. Toxicology: Is a study of the chemical, physical, physiological actions of poisons. The laboratory courses embrace the official tests for poisons. *Seven hours, third term.*

Thesis: Development and preparation of an original theme on some subject relating to veterinary medicine and surgery, or veterinary sanitation and hygiene, is required. *Four hours, entire year.*

FIRST, SECOND AND THIRD YEARS.

119. Comparative anatomy: Based upon the descriptive anatomy of the horse. It includes lectures and dissection. The course in anatomy is continued in the dissecting room throughout the first and second years, and the first term of the third year. The work will be taken up in the following order:

(a) Osteology: Requires a thorough knowledge of the bones of the horse and the comparative variations as found in the ox, pig, dog, and sheep.

(b) Arthrology: The course consists in a study of the joints or articulations and the synovial sacs.

(c) **Myology:** Includes a study of the muscles with their tendons and synovial sheaths or bursæ.

(d) **Splanchnology:** Treats of the internal organs found in the thorax and abdomen. Special attention will be given to these subjects in the horse, ox, sheep, pig, dog, and cat. It is designed both for the practitioner and meat inspector.

(e) **Angiology:** It treats of the blood vessels and heart and lymph vessels and glands. This is designed to meet the requirements of the practitioner and meat inspector; hence, the students must locate the lymph and glands in the horse, ox, sheep, pig, and dog.

(f) **Neurology:** Calls forth a study of the cerebro-spinal and sympathetic nervous systems.

(g) **Special anatomy:** Comprises the study of the organs of special sense, urino-genital organs, the foot and the larynx.

120. **Materia medica and therapeutics:** A study of the principal drugs used in veterinary medicine, their doses, physiological actions, therapeutic uses, and prescription writing. *Third term of second year; and first and second terms of third year.*

121. **General surgery:** This course embraces the general principles of surgery. *Two hours, third term of second year; and first term of third year.*

122. **Clinical laboratory:** Free clinics. Students are required to study each case. A great variety of cases is always presented. *One or two hours each day, second and third years, and three hours on Saturday for all classes.*

123. **Veterinary medicine:** This deals with the principles and practice of veterinary medicine. *Three hours, second and third years.*

COURSES FOR TEACHERS.

124. **Physiology and hygiene—Teachers' course:** The department can give the following line of instruction to prospective Alabama teachers.

1. Structure of human body and animals.

(a) Study of cells, tissues and organs.

(b) How to use the smaller animals in teaching naked-eye anatomy.

2. Physiological actions of the different parts and products of the animal and the human body. This embodies:

(a). Functional tests.

(b). Chemico-physiological tests.

3. Hygiene, embracing instructions in personal health problems.

4. Sanitation, including health conditions of cities, homes, public buildings, farms, barns, dairies, etc.

5. Care of animals on the farm and in the city.

TEXT AND REFERENCE BOOKS.

- General Chemistry—Remsen's College Chemistry.
Physiology Recitations—Martin's Human Body.
Physiology Laboratory—Fish's Elementary Exercises in Physiology; Smith's Manual of Veterinary Physiology.
English—to be announced in September.
Anatomy—Sisson's Comparative Anatomy.
Clinical Laboratory—Blank Books or Note Books.
Histology—Piersol, Bohm, Davidaff and Huber, Bailey, and Lectures.
Embryology—Hertwig-Mark; Minot. Lectures.
Livestock Management—Lectures and text-books to be announced later.
Feeding Livestock—Smith; Henry; Jordan.
Animal Husbandry—Crang, and Lectures.
Botany—Lectures; Pammel's Poisonous Plants.
Pharmacy—Lectures; Stevens.
Bacteriology—Lectures; Moore's Bacteriology.
Pathology—Zeigler; Kitt; Adami; Kingsley.
Obstetrics—Williams; DeBruin; Fleming; Dalrymple.
General Surgery—Lectures and Frohner; Moeller.
Special Surgery—Lectures; Moeller; Merillat; Frohner.
Surgical Exercises—W. L. Williams.
Materia Medica and Therapeutics—Wilcox; Winslow; Fish; Quitman; Frohner.
Veterinary Medicine—Law, Vols. 1, 2, and 3. Mossou; Friedberger and Frohner.
Infectious Diseases—Moore—Law. Vol. 4.
Parasites—Neuman—Law. Vol. 5; Stiles; Kaupp.
Milk and Meat Inspection—Van Slyke; Conn; Ostertag; Peters; Eddleman; Eichhorn; Lectures.
Toxicology—Tanner; Fish.
Urine Analysis—Fish.
Restraint of Animals—White.

ORGANIZATIONS

CADET BAND.

A. L. THOMAS, BANDMASTER.

Three musical organizations are maintained—the band, the orchestra, and the glee club. Membership in these organizations is open to any student who has musical talent.

The band is maintained by the college for students who desire to develop their musical ability and for those who wish to learn music. It furnishes music for all college exercises and takes part in military manoeuvres. Regular and individual instruction is given free of charge during the first term, embodying the rudiments of music and general musical information in conjunction with the practical instruction on the instrument. Public concerts are given weekly during the second term, and engagements elsewhere are usually arranged.

A gold medal is given each year by the bandmaster to the member who makes the best record.

The orchestra is an organization for musical recreation, and members are carefully selected by the director according to their musical ability.

The glee club, comprising the quartet, chorus, and stringed instruments, is a student organization. The services of a musician are secured to assist with the instruction and training of the quartet and chorus. Two concerts are given at the college and concert tours are arranged during the second and third terms.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

S. J. SMITH, GENERAL SECRETARY.

This association is regularly organized and a suite of well furnished rooms has been secured for its exclusive use. Through its weekly meetings and Bible Study Classes it exerts a wholesome Christian influence among the students.

Students are advised to unite with the association when they enter the college.

The ladies of the different churches in Auburn are organized into an auxiliary association to the Y. M. C. A. of the college.

LITERARY SOCIETIES.

There are two literary societies connected with the Institute—the Wirt and the Websterian. Each has a hall in the main

building. These societies hold celebrations on the evenings of Thanksgiving day and 22nd of February.

To encourage the literary societies the trustees have directed that a medal be awarded at Commencement to the member of each society who is both efficient and regular in attendance, and who is the best debater. The method of selection is determined by the faculty.

SOCIETY OF THE ALUMNI.

The annual alumni oration is delivered by a member of the society in Langdon Hall on Alumni Day, Tuesday of Commencement week.

OFFICERS OF THE ALUMNI ASSOCIATION.

Hon. F. Lloyd Tate, '97, Wetumpka, Ala.	Orator
Thomas Bragg, '01, Auburn, Ala.	President
J. B. Lovelace, '14, Auburn, Ala.	Secretary and Treasurer

Non-Resident Vice-Presidents.

E. N. Brown, '82	Mexico City, Mexico
Francis C. Dillard, '75	Sherman, Texas
E. A. Price, '80	Nashville, Tenn
Arthur Redding, '94	Atlanta, Ga.
Oliver J. Semmes, Jr., '97	Pensacola, Fla.
M. S. Sloan, '01	New Orleans, La.

Alabama Vice-Presidents.

B. B. Ross, '81	Auburn, Ala.
W. W. Pearson, '82	Montgomery, Ala.
C. W. Ashcraft, '88	Florence, Ala.
Roger apC. Jones, '87	Selma, Ala.
J. Thos. Heflin, '91	Washington, D. C.
Tracy Lay, '03	Gadsden, Ala.
Jno. V. Denson, '05	Opelika, Ala.
J. R. Rutland, '00	Auburn, Ala.
B. L. Shi, '04	Auburn, Ala.
M. A. Frazer, '06	Mobile, Ala.
Rev. Thomas Mangum, '96	Union Springs, Ala.
Howard Lamar, '82	Jasper, Ala.

ENGINEERING SOCIETY.

All students in the courses of engineering and architecture are eligible for membership in the Engineering Society. Meetings are held twice a month, and the chief purpose of the society is to promote personal fellowship among the members, and closer affiliation with practical engineers. Prominent engineers in all lines are invited to address the society from



Alumni Gymnasium

time to time upon subjects connected with their work. At other meetings the program is supplied by the student members, thus giving opportunity for the students in one department to become somewhat familiar with the problems met with in other lines of engineering.

Suitable quarters have been provided for the society in the new Broun Engineering Hall. No regular dues are required of the members, but an occasional assessment is made to cover necessary expenses.

AGRICULTURAL CLUB.

The Agricultural Club was organized in 1907. All students interested in agriculture and the agricultural sciences are eligible for membership. The members of the Agricultural Faculty take an active part in the work of the club. Meetings are held once a week, and an effort is made to promote interest in all lines of agriculture, to develop a spirit of good fellowship among the students of the course, and to bring them in contact with prominent workers of the science as opportunity offers to present them on the regular program.

Meetings are held in the club room in Comer Agricultural Hall.

VETERINARY MEDICAL ASSOCIATION.

The Veterinary Medical Association was organized in 1907. The meetings are held bi-weekly in the veterinary building. Medical subjects are discussed by the members or by some invited speaker or member of the veterinary faculty. All students of the Veterinary College are eligible to membership. The objects of the association are fraternal, intellectual and cultural. The annual banquet of this association is an occasion of good fellowship for the students, faculty, and veterinary alumni.

GYMNASIUM AND ATHLETIC FIELD.

The new Alumni Gymnasium offers improved facilities for complete physical training in outdoor and indoor work. The college authorities attach due importance to the value of robust, physical health. Military drill according to the Federal Law is required of all able-bodied students, and ample opportunity is also offered for work in the gymnasium and field sports. The aim of the athletic authorities is to develop, not only a set of highly trained athletic experts in particular fields of sports, but to interest each individual student in the care and development of the body through some form of athletic activity. While, therefore, every effort is made to maintain a high stand-

ard of athletic efficiency in various representative teams, every member of the "Auburn" student body is encouraged to gratify his love for games and sports, as well as to assimilate the "Auburn Spirit" in its intensest form; a spirit splendidly exemplified by the Alumni in making possible this handsome Gymnasium. This beautiful athletic home ranks "Auburn" as one of the best equipped colleges in the land for the development of the physical welfare of its students. Under present conditions it is possible for two thousand students to take physical exercise at the same time.

DRAKE FIELD—A new athletic field, named in honor of the Surgeon, Dr. J. H. Drake, has been provided for baseball, football, and track athletics. It is situated on the experiment station grounds near the gymnasium. It will be gradually beautified and equipped with necessary buildings and accommodations.

DISCIPLINE REGULATIONS.

The government of the college is administered by the president and faculty in accordance with the code of laws and regulations enacted by the trustees.

Each student upon entering is required to sign his name in the matriculation book and pledge himself to obey the rules and regulations of the college.

All students are required to wear the prescribed uniform.

Attention to study and punctuality in attendance on recitations and all other duties are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using or causing to be brought into the college limits, intoxicating liquors.

Students are not permitted to participate in any public entertainments, or game, without previously obtaining the consent of the faculty.

No student will be permitted without the approval of his parent or guardian, to take part in a public game of football.

No student who has failed in two or more subjects will be permitted to be absent from college for athletic contests or other purposes.

(a) Every absence from recitation or examination is graded zero.

(b) when the grade of a student is lowered by reason of absence, for which satisfactory excuse can be rendered, a special re-examination may be subsequently granted, and the

grade made on the special re-examination alone is substituted for that previously received.

(c) Only sickness, as reported by the surgeon, or absence by reason of family sickness, or official or collegiate business, will constitute a satisfactory excuse for granting a re-examination.

When a student is called away from college by his parents for reasons other than those specified above, his zeros for absence are not removed.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

The term grade of a student is the average of his daily sessional and term examination marks, found by giving due weight to the term examination.

Only privates of the senior class in full standing who are candidates for graduation may be excused by the president from all military drills, and also students over twenty-one years of age *at the time of entering college* that are permitted to devote their time to one special study, as chemistry, agriculture, pharmacy, or engineering, provided the time devoted to drill is spent by them in laboratory work.

No student can remain an officer who receives during the session more than one hundred demerits.

BOARDING.

The students board at Smith Dining Hall or with families of the town of Auburn, thus enjoying all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who are guilty of any violation of order. The report of the inspector is made to the commandant at stated intervals.

Students, after selecting their boarding houses, are not permitted to make changes without obtaining permission from the president, and this permission is given only at the close of a term, except for special reasons approved by the parent.

MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapacitated to bear arms, are required to engage in these exercises; privates of the senior class are exempt.

The drills are short and the duty involves no hardships. The military drill is a health-giving exercise, and its good

effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students, unless excused on the written request of parents for religious scruples, are required to attend these exercises, and also to attend the church of their choice on Sunday morning.

Opportunities are also offered for attending Bible classes every Sunday.

DISTINCTIONS AND HONORS.

Certificates of highest distinction and of distinction are given on the basis of credits, one credit being considered as the equivalent of one recitation per week for one term. Two hours of laboratory or shop work or drawing are counted as one hour of recitation. An undergraduate student taking less than an average of eighteen credit hours per term will not be eligible for distinction. Certificates will be awarded to those students who have not received more than forty demerits and who comply with the scholarship requirements announced by the faculty.

Members of the senior class who attain highest distinction are published as *Graduates with Highest Honor*; those who attain distinction are published as *Graduates with Honor*; seniors who do not attain distinction but who attain a grade of sixty per cent or above are published as *Graduates*.

RECORDS AND REPORTS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

At the close of each term and at regular intervals reports giving the grade made by each student are sent to the parent or guardian.

EXAMINATIONS.

Written examinations on the studies of the half-term are held by each professor during the months of October and February. Each examination occupies one hour.

At the end of each term written examinations or written and oral, are held on the studies passed over that term.

Special examinations are held only by order of the faculty and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examinations can be promoted to full standing in the next higher

class only on satisfactory examinations at the opening of the next session.

It is required that every student who enters college shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within three weeks of the examination, except for providential reasons.

RE-EXAMINATIONS.

Re-examinations for deficiencies incurred by students before entering the senior class shall be set not later than the first week in April, except when deficiencies are being made up in class. Seniors failing in any subject will have two opportunities for removing the conditions.

No senior who fails on two final examinations will be re-examined.

No re-examination will be given seniors after the Saturday before Commencement.

HONOR SYSTEM.

During the session of 1910-11 the Honor System, which for years had been in effect in the higher classes, was adopted by the entire student-body of the institution, to apply to all work done in class room and on examinations. Under this system the student is pledged neither to give nor receive any assistance, whatsoever.

All students upon entrance subscribe to the Honor System as in force at this institution.

Proper regulations for administering the system have been adopted by the student-body.

The spirit of truth and honor, thus fostered in the examination room, is an efficient means of raising the scholarship, and tends to inculcate high ideals of honor among the students.

SCHOLARSHIPS—PRIZES.

The following scholarships and prizes have been established:

THE WILLIAM LEROY BROUN MEMORIAL SCHOLARSHIP OF \$170, established by the Alumni Society, in memory of the late distinguished president of the Institute.

THE LIGON SCHOLARSHIP OF \$170, established by Col. R. F. Ligon, Montgomery, Ala.

THE THOMAS SCHOLARSHIP OF \$170, established by Judge William H. Thomas, Montgomery, Ala.

THE BALL SCHOLARSHIP OF \$170, established by Mr. Fred S. Ball, Montgomery, Ala.

THE DUNKLIN SCHOLARSHIP OF \$600, established by Mr. and

Mrs. J. C. Street, Opelika, Ala., in memory of Prof. J. T. Dunklin, former professor of Latin in the college.

THE 1908 SCHOLARSHIP OF \$150, established by the Class of 1908.

THE ALICE CARR SCHOLARSHIP OF \$180, established for young women by the late Miss Alice Carr, Auburn, Ala.

THE RANSOM MEMORIAL SCHOLARSHIP OF \$125 per year, established by the Alumni Association in memory of the late Prof. A. McB. Ransom, is available for students in the junior and senior classes of the course in chemistry and metallurgy.

THE JEWISH LOAN SCHOLARSHIP OF \$1,000, established by a former student of the college.

A scholarship has been established for worthy musicians who are in need of assistance in defraying their college expenses.

THE HENDERSON SCHOLARSHIP OF \$100, established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE SIDNEY SMITH MEMORIAL SCHOLARSHIP OF \$100, established by his parents, Mr. and Mrs. Smith, Bessemer, Ala.

THE C. S. YARBROUGH SCHOLARSHIP OF \$1,000, established by Dr. C. S. Yarbrough, Auburn, Ala.

The scholarships enumerated above are loan scholarships, granted to worthy young men and women, to be returned after graduation.

THE ROBERT E. LEE MEMORIAL SCHOLARSHIP OF \$100, an annual donation for the son of a Confederate veteran, established by the Children of the Confederacy of Alabama under the auspices of Mrs. Mary G. Pickens.

The above named scholarships and ten other scholarships are administered by the Alumni Society. (*For information, address J. B. Lovelace, Secretary*).

THE GRAYDON SCHOLARSHIP FUND OF \$3000, established by the family of the late Augustus T. Graydon, of South Carolina, a loyal alumnus of the class of 1914.

SOUTHERN RAILWAY LOAN SCHOLARSHIP OF \$1000, established by the Southern Railway in memory of the late W. W. Finley, President of the Southern Railway.

THE ARCHITECTS' PRIZES, medals to the two members of the senior class in the department of architecture who are most proficient in design. Established in 1911 by the Society of Architects in Alabama.

THE THOMAS ESSAY PRIZE, a gold medal offered by Hon. William H. Thomas, of Montgomery, Ala., for the best essay by any undergraduate student of the college. The essay must be written under the supervision of the department of English.



THE ORATORICAL PRIZE, medal to that member of the junior class who composed and delivered the best oration on junior class day of Commencement. 1915, *James Warren Andrews*, Montgomery County.

THE ORATORICAL PRIZE, for the Annual Inter-Literary Society Contest, February 22, 1916: *Lovick Pierce Hodnette*, Macon County.

SOPHOMORE MEDAL IN DECLAMATION for Annual contest, May 1st, 1915: *Shu Min Wong*, China.

PRIZE FOR BEST DEBATER, a medal given annually by the Board of Trustees to the best debater in the Wirt and Websterian Literary Societies each. 1915: Wirt—*John Hosmer Campbell*, Clay County; Websterian—*Edmund Mitchell Manning*, Chilton County.

REGIMENTAL MEDAL, for the best drilled soldier. 1915: *Joseph Davenport Browne, Jr.*, Tennessee.

MUSIC MEDAL, 1915: *David Adolphus Gammage*, Barbour County.

PRIZE FOR BEST DRILLED COMPANY, a sword given by Board of Trustees. 1915: *Joel Philip Melvin*, Tennessee.

THE R. W. BURTON PRIZES, for excellence in drawing: 1915, mechanical drawing, *Yndalicio Elizondo*, Mexico; architectural drawing, *Owen Mahone Liles*, Escambia County; descriptive geometry, *Wilbur Thomas Shinholser*, Georgia.

LIBRARY.

LIBRARIAN, JAMES R. RUTLAND.

ASSISTANT LIBRARIAN, MISS MARY MARTIN.

The beautiful Carnegie library building is constructed of stone and pressed brick. The reading room is 80 x 40 feet, and the building is equipped with every convenience. It is lighted by electricity and heated by steam. The capacity of the stack room is sixty thousand volumes. The library now contains about 25,000 bound volumes, including valuable reference and scientific books, with select editions of standard authors, and others suitable for students, carefully and recently selected. It is kept open eight hours daily for the use of students as a reading room and is thus made an important educational feature.

THE O. D. SMITH COLLECTION.

The library of the late Prof. O. D. Smith has been presented to the college by Mrs. O. D. Smith, and is preserved as a memorial to his long and distinguished services to the college.

THE F. D. PEABODY MEMORIAL ROOM.

Through the generosity of Mr. George Foster Peabody, New York City, an annual fund of fifty dollars, income from a permanent investment, is available for the purchase of books and furniture for the "F. D. Peabody Memorial Historical Seminary." F. D. Peabody, Esq., was a distinguished graduate of the Class of 1876.

THE W. D. TAYLOR MEMORIAL COLLECTION.

The engineering library of the late W. D. Taylor, chief engineer of the Chicago and Alton Railway, was bequeathed by him to the Alabama Polytechnic Institute, and is preserved by the college as a memorial to this distinguished alumnus. Mr. Taylor was a graduate of the class of '81, and was regarded as one of the leading civil engineers of the United States.

MUSEUM.

The Museum occupies a large room in the third story of the Main Building. It is provided with suitable cases and is equipped with valuable specimens and models of an instructive character.

UNIFORMS.

A uniform of cadet gray cloth is prescribed, which all undergraduate students are required to wear during the session. The uniforms are made by a contractor, and are of excellent cloth manufactured at the Charlottesville mill. A suit, including cap, costs at present \$15.50. It is neat and serviceable, and less expensive than ordinary clothing.

LABORATORY FEES.

Each student in the following courses is required to pay the laboratory fee specified:

Chemical laboratory	\$ 5.00
Pharmacy laboratory	5.00
Electrical engineering laboratory	5.00
Mechanical engineering laboratory	5.00
Veterinary medicine (dissecting fee)	10.00
Dairy laboratory	3.00
Soils laboratory	3.00
Horticultural laboratory	1.00
Botanical laboratory	1.50 to 2.50
Civil engineering (surveying)	1.00
Civil engineering (road materials laboratory)	1.00
Civil engineering (summer camp, including board)	18.00

Special students in laboratory work will pay additional fees

for each separate division of work, and will be charged with all material consumed in experiments.

CONTINGENT FEE.

A contingent fee of \$2.50 is required to be deposited by each student on matriculation to cover any special or general damage to college property for which he may be liable. General damages are assessed on the body of students.

At the close of the session, the whole of the contingent fee or the unexpended balance, is refunded to the student.

FUNDS OF STUDENTS.

Parents or guardians are advised to deposit with the treasurer of the college all funds desired for sons or wards, whether for regular charges, college fees or board or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc.

The college cannot be held responsible for the expenses of a student unless the funds are deposited under specific instructions from the parent or guardian to the treasurer. No student should be permitted to have a large amount of pocket money, as it brings only trouble and encourages idleness.

NON-RESIDENT STUDENTS.

Tuition for students not resident of Alabama is \$20.00 per session, unless remitted by the trustees to worthy students upon the recommendation of the faculty.

The remission of this tuition fee to non-resident students will be granted in the form of a free scholarship for the succeeding year to those who obtain a distinction the preceding year, or who, by reason of merit, are deemed worthy.

This tuition for non-residents is remitted to sons of ministers of the Gospel.

The following non-resident students were granted, each by reason of special merit in conduct and scholarship during the session of 1914-1915 an honor scholarship, which exempted from tuition fees:

William Wallace Allen	-----	Florida
William Lee Blanton	-----	Florida
Joseph Davenport Browne, Jr.	-----	Tennessee
Thaddeus Lamar Glenn	-----	South Carolina
William Arnold Guess	-----	Mississippi
Henry Lord Page King	-----	Georgia
James Belser Mayes, Jr.	-----	Georgia

William Charles Payne, Jr.	Tennessee
Alan Benjamin Pimm	Florida
Wilbur Thomas Shinholser	Georgia
Frank King Simmons	Florida
Ernest Slager	Tennessee
John Alan Strozier	Georgia
William Woodward Sullivan, Jr.	South Carolina
Lovell Lack Turley	Missouri
Francis Bryan Wakefield, Jr.	Florida
Lamar Mims Ware	Georgia
Shu Min Wong	China

EXPENSES.

There is no charge for tuition for a resident of Alabama.

Board, including lodging, fuel, and lights, is furnished at \$14.00 to \$18.00 per month.

By special arrangement with the college authorities, Mrs. M. M. O'Neal and Mr. B. T. Blasingame will accommodate students with board and lodging for \$14.00 per month.

For non-residents of the State, there is a charge of tuition of \$20.00 per session, payable on matriculation, in addition to the annual fees payable by all students. A student once entering as a non-resident will not be permitted to claim residence unless his parent or guardian becomes a resident or taxpayer on property in Alabama. Tuition for non-residents is remitted to sons of ministers of the Gospel.

AMOUNT OF DEPOSIT.

All fees, including laboratory fees are payable on matriculation. *By order of the Trustees a matriculation fee of \$12.00 is retained from deposits of students who withdraw. To students who withdraw after one month's residence in college only the remainder of the laundry fee and the contingent fee, less charges, may be returned; no laboratory fee may be returned; after the beginning of the third term only the contingent fee may be returned.*

Fees to be paid on entrance:

Incidental	\$ 5.00	
Library	2.00	
Surgeon	5.00	
Contingent	2.50	
Athletic	6.00	
Uniform	15.50	
Laundry fee for session	12.50	
		<hr/>
For a resident of Alabama	\$48.50	\$48.50
Tuition non-resident		20.00
		<hr/>
For a non-resident		\$68.50

THESIS.

Each applicant for a degree is required to write and submit to the faculty a thesis, or oration and read or deliver the same at Commencement, if required by the faculty.

There may be presented with the approval of the professor in charge, a carefully written report of special work done in a laboratory, showing independent investigation and discussion of some subject.

It must be given to the professor by the first of May. The subject must be submitted for approval by January 1st.

SURGEON.

The Surgeon is required to be present at the college daily, to visit at their quarters the cadets that are reported sick, and give all requisite medical attention without other charge than the regular surgeon's fee, paid on entering the Institute.

An infirmary has been established, and is properly equipped.

LOCATION.

The Institute is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railway of Alabama.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty six feet above tidewater. By statute of the State the sale of spirituous liquors and the keeping of saloons of any kind are forbidden.

ACADEMIC YEAR.

The academic year for 1916-1917 commences on Wednesday, September 13, 1916, and ends on Tuesday, June 12, 1917, which is Commencement Day.

It is divided into three terms: The first term extends from the opening of the session to Thursday, December 21st; the second term begins Wednesday, January 3rd, and ends March 26th; the third term continues to the end of the session.

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JUN 1917

Vol. XII

No. 1

THE BULLETIN

OF THE

ALABAMA POLYTECHNIC INSTITUTE

AUBURN

CATALOGUE

1916-17

ISSUED MONTHLY
BY THE INSTITUTE
MARCH, 1917

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CATALOGUE
OF THE
ALABAMA
POLYTECHNIC INSTITUTE

STATE COLLEGE

FOR THE BENEFIT OF
AGRICULTURE AND THE MECHANIC ARTS

AUBURN, ALABAMA

1917

1917
POST PUBLISHING COMPANY
OPELIKA, ALA.

CALENDAR FOR 1917-18-19

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COLLEGE CALENDAR 1917-18

Summer Session.....	June 14 to July 25, 1917
Examination for Admission Begins.....	Monday, Sept. 10, 1917
Session Begins.....	Wednesday, Sept. 12, 1917
First Term Begins.....	Wednesday, Sept. 12, 1917
Mid-Term Examinations.....	Oct. 22, 23, 24, 1917
Literary Society Celebration.....	Nov. 29, 1917
First Term Ends.....	Thursday, Dec. 20, 1917
Second Term Begins.....	Wednesday, Jan. 2, 1918
Mid-Term Examinations.....	Feb. 9, 11, 12, 1918
Senior Class Exercises.....	Feb. 22, 1918
Literary Society Celebration.....	Feb. 22, 1918
Second Term Ends.....	Monday, March 25, 1918
Third Term Begins.....	Monday, March 25, 1918
Senior Theses Reported.....	May 1, 1918
Declamation Exercises.....	May 1, 1918
Field Day.....	May 1, 1918
Final Examinations Begin.....	Saturday, May 25, 1918
Junior Class Orations.....	Saturday, June 8, 1918
Commencement Sermon.....	Sunday, June 9, 1918
Annual Meeting of Trustees.....	Monday, June 10, 1918
Alumni Day.....	Monday, June 10, 1918
Senior Class Orations.....	Monday, June 10, 1918
Festival of Lights, 8 P. M.....	Monday, June 10, 1918
Commencement Day.....	Tuesday, June 11, 1918

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MARY E. MARTIN, Assistant Librarian.

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MRS. H. M. GRATTAN, Matron, Smith Dining Hall.

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Committee on Examination of Special Students—Professors Wilmore, Dunstan, Duggar, Blake, Hinds.

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HON. J. A. ROGERS.....	Gainesville
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J. F. DUGGAR, Director of Experiment Station and Extension

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O. H. Sellers, Assistant.
O. L. Howell, Assistant.
F. E. Boyd, Assistant.

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_____, Assistant.

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* Deceased.

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E. A. Vaughan, Field Asst.

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E. Gibbens, Assistant.
F. W. Wendt, Assistant.
A. E. Hayes, Assistant.

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R. U. Blasingame, Agricul-
tural Engineer.

The Institute is a distinctive school of science and its applications; being also the State College for the benefit of Agriculture and the Mechanic Arts, established by the State in 1872 by endowing it with the land grant appropriation made by the United States Congress in 1862.

The leading object of the Institute, in conformity with the Act of Congress and the Acts of the State Legislature, is to teach the principles and applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts; and at the same time the discipline and liberal education obtained by the study of language and other sciences are not neglected.

All students are required to study the English Language. The Latin, French, Spanish and German languages are also taught, and opportunity for their study is offered to students in any course.

The special and technical instruction given is thus based on a sound, general education.

In its different courses of education, work of great value to the youth of the State is accomplished by fitting them by a thorough science-discipline, in which manual training in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the faculty. The Institute thus endeavors to educate as well as to instruct, to form character as well as give information of value.

ORGANIZATION

The instruction offered by the College is arranged in four divisions: (1) College of Engineering, Mines and Architecture, (2) College of Agricultural Sciences, (3) Academic Departments, (4) College of Veterinary Medicine and Surgery.

I. The College of Engineering, Mines and and Architecture offers degree courses in (1) civil engineering, (2) electrical engineering, (3) mechanical engineering, (4) mining engineering, (5) chemical engineering, (6) chemistry and metallurgy, (7) architecture, and (8) architectural engineering.

In addition, students in these courses of the College of Engineering, Mines and Architecture receive instruction in other departments as follows: Mechanical drawing and machine design, English, mathematics, history and Latin, modern languages, physics, chemistry, and military science and tactics.

II. The College of Agricultural Sciences offers regular degree courses in (1) agronomy, (2) chemistry, (3) botany, (4) horticulture and forestry, (5) animal husbandry, and (6) pharmacy; a three-year course in pharmacy; a two-year course in pharmacy; a two-year course in agriculture.

In addition students in the different departments of the College of Agricultural Sciences receive instruction in other departments as follows: English, history and Latin, modern languages, mathematics, mechanic arts, surveying, physics, geology and mining engineering, mechanical drawing and machine design, military science and tactics, and veterinary science.

III. A degree course is offered in the following subjects: Education, political economy, mental science, English, history and Latin, modern languages, mathematics, physics, military science and tactics.

In addition students in the general course receive instruction in the following technical departments: Mechanic arts, drawing, geology, animal husbandry, chemistry, botany, and agronomy.

IV. The College of Veterinary Medicine and Surgery offers a four-year course leading to the degree of Doctor of Veterinary Medicine. This college comprises the following departments: Veterinary medicine, physiology, surgery, anatomy, therapeutics, pathology, histology, bacteriology, obstetrics, infectious diseases, meat inspection, milk inspection, and animal parasites.

FACILITIES FOR INSTRUCTION

The Institute possesses facilities for giving laboratory instruction in history, Latin and the departments of applied science.

COLLEGE OF ENGINEERING, MINES AND ARCHITECTURE.

I. Civil Engineering.—The department of civil engineering is located in Broun Hall, and occupies two lecture rooms, a drafting room, an office, an instrument room and a road materials laboratory. It is equipped with transits, levels, plane tables and other instruments necessary for giving field practice in the several branches of surveying.

A very complete camping outfit, consisting of tents, cots, stools and kitchen and mess tent outfit, is available for use in the summer camp and school of surveying.

The drafting room is spacious and well lighted, and is equipped with well appointed drawing desks, tables, filing cases, models of bridges and roofs, and a large number of blue prints donated by various bridge companies for study and comparison by students in bridge and structural design.

In practical hydraulics, the college water works system, including pipe lines, pumps, stand pipe, bored wells with air lifts, fire hose and nozzles, etc., are available for use of the students; and the students also determine the flow in several natural streams with aid of current meters and weirs. There is a number of large and small hydro-electric plants relatively near Auburn, and visits of inspection are made by students to these plants.

II. Electrical Engineering.—In the engineering building four rooms and two offices are used by the department of electrical engineering. Two rooms are class rooms, another is used for the telephone laboratory, and the fourth is a laboratory for electrical measurements.

The wiring in this building is arranged so that alternating and direct currents of various voltages for power, lighting, and experimental purposes can be delivered to any room.

In connection with the laboratories there is installed a repair and construction shop furnished with a variety of hand tools and with power-driven machine tools.

A large amount of electrical testing and measuring apparatus as well as commercial machinery has recently been installed in the laboratories.

(a) The electrical measurement laboratory is furnished with a variety of resistance boxes, bridges, galvanometers, standard cells, condensers, etc., as well as two photometers. In addition to the laboratory instruments proper, just noted, the department

is provided with representatives of most of the types of commercial ammeters, voltmeters, and indicating and recording wattmeters for A. C. and D. C. work. There is also a 30,000 volt transformer for break-down tests of insulating materials.

(b) The Telephone laboratory is provided with a full line of telephonic apparatus, telephones, relays, condensers, plugs, jacks, lamp and other signals, etc., representative of the Bell and a number of independent telephone companies.

Single pieces are so mounted that they can be connected up in any desired manner and thus the connections of any particular system can be made up and tested out.

Twenty cells of Edison storage battery are used to furnish energy for a board equipped for common battery and magneto service with trunking circuits. This board is a standard 100 line board equipped with one strip of twenty answering and multiple jacks, ringing, listening keys, and cord signals for four cords.

(c) The laboratory is equipped with a large number of D. C. and A. C. generators, motors, and other appliances especially adapted for experimental work. In addition the equipment of the power plant is so arranged as to be readily available for purposes of instruction and investigation.

The machines for experimental work are arranged on testing platforms rendering them readily accessible. By means of a comprehensive wiring layout with individual connection boards for each machine, a wide variety of combinations of machines can easily be made.

The main power plant supplies power for operating all shops, and laboratories, pumping water, and lighting the town of Auburn. The connected motor load is a little over 250 horse power, and about 100 kilowatts are used for lighting service. This plant therefore affords unusual opportunities for students to obtain practical experience in the operation of steam and electrical machinery under commercial conditions.

III. Mechanical Engineering.—The laboratory work is considered an important part of the course and is arranged as far as possible to illustrate and supplement the work as carried on in the class room.

The steam and heat engineering laboratory is located on the first floor of Broun Hall, and the following apparatus is available for instruction: A 35-horse power cross compound engine, especially arranged for experimental work; a surface condenser with air and circulating pumps attached; a 20-horse power slide valve engine; an electric head light engine; a 15 horse power steam turbine; steam pumps, hot and cold water meters, tanks, scales, indicators, calorimeters, thermometers, pyrometers, steam gauges and apparatus for testing steam gauges.

In the line of internal combustion engineering the following apparatus is available for instruction purposes: A 12-horse power four stroke cycle engine using gasoline or kerosene, a 4½-horse power four stroke cycle kerosene engine, a 2½-horse power kerosene engine, a 2-horse power two stroke cycle gasoline engine, an Ericsson hot air engine, a motor driven air compressor with motor, a volume blower, and the necessary tanks, scales, indicators and other auxiliary apparatus necessary for making tests.

A refrigerating plant of 2½ tons capacity, including ammonia condenser and cooling coils, brine circulating system, pumps, meters, weighing scales and all apparatus needed for a study of the refrigeration cycle. The plant is driven by a steam engine, and provision is made to measure the power delivered and steam consumption of the engine.

The equipment of the power house is also available for instruction, and consists of the following: A 300-horse power poppet valve engine; a 160-horse power angle compound engine; a 60-horse power simple engine; a 200-horse power water tube boiler; a 100-horse power water tube boiler, two locomotive air pumps.

Another room on the first floor of Broun Hall has been fitted up for a laboratory for testing of materials. In it are installed a Riehle testing machine arranged for making transverse, compression and tension tests, and micrometer apparatus for measuring the deformation of the specimen under test, and an Olsen torsion testing machine with auxiliary apparatus. There is also provided a cement testing outfit consisting of a testing machine, sieves, briquette moulds, boiler, and other apparatus for testing the strength, setting properties, fineness, and specific gravity of cement.

On the second floor of Broun Hall is located a laboratory for testing fuels, furnace and illuminating gases, and lubricants. The present equipment consists of a Mahler bomb calorimeter and a Parr calorimeter, for determining the heating value of fuels, complete apparatus for collecting and testing flue and furnace gases, apparatus for determining viscosity, the specific gravity, flash point, the coefficient of friction, and other properties of lubricating oils. A small electric motor furnishes power for grinding samples, driving blower for air blast, stirring, and other such work.

IV. Mechanic Arts.—The instruction in shop work is used as an auxiliary in technical education, and as a school of manual training in the arts that constitute the foundation of most industrial pursuits. The work performed by the students is instructive in character, and is intended to give the greatest amount of instruction in principle with the least repetition of

operations, and the smallest consumption of time. The work is executed from drawings, and the instructor in charge of the class makes the lessons before the class, or gives such specific directions as may be necessary to enable the student to make them. This is supplemented by individual instruction.

All students in the freshman class take this shop work, three periods a week, each period being two hours long. The sophomore class takes two periods a week. The purpose is not to teach a trade, but to train the eye, the hand, and the mind to more perfect co-operation, a training which will be of value in any pursuit in life. This training involves the principles at the foundations of all trades, of equal value to the student who wishes afterwards to learn a trade.

Three-phase electric motors are used for driving the different shops, the motors receiving current from the large alternator in the power house.

(a) The wood department is located in a room 90 x 50 feet, and is provided with a surface planer, a variety saw, a swing cut-off saw, a boring machine, and a grindstone. There are in addition, thirty benches for carpentry work, with the necessary tools.

(b) The wood turning and pattern shop is located in a commodious room 40 x 60 feet, in the second story of the new power house. It is equipped with twenty-eight wood-turning lathes, a grindstone, a band saw, a buzz planer, a pattern maker's lathe, a double circular saw, a surface planer and a drum sand-papery machine.

In each of these departments special tools for occasional use are kept in a tool room for the purpose.

In addition to the regular carpentry tools in the benches each student is supplied with a set of chisels, and plane irons, with a locker to keep them in, and is held responsible for their care and condition.

(c) The forge shop is equipped with twenty-four down draft forges, with anvils, hammers, sledges, and other tools necessary for blacksmith work, including a punch and shear for cutting and punching iron, and a blacksmith drill. The blast is supplied by a blower driven by an electric motor. The smoke from the forges is removed through underground passages by a 60-inch exhaust fan and discharged into the chimney.

(d) The foundry is equipped with a 23-inch Colliau cupola, having a melting capacity of 2,000 pounds of iron per hour, the necessary molding tools for bench and floor work, benches, a core oven, ladles, molding flasks, a foundry crane, etc. A special blower driven by an electric motor is provided to furnish air blast for the cupola. There is also a brass furnace with

crucibles, crucible tongs and the appliances necessary for making brass castings.

(e) The machine shop is a room 30 x 100 feet, and is equipped with ten 14-inch, two 16-inch and one 18-inch engine lathes, one 10-inch speed lathe, a 20-inch drillpress, a 10-inch sensitive drill, a 16-inch shaper, two iron planers, one 22-inch by 5 feet and the other 26-inch by 6 feet, a back geared universal milling machine, with vertical milling attachment, a water tool grinder, a bench grinder, a universal grinding machine, a universal cutter and reamer grinder, a twist drill grinder, and two power hack saws. Four of the engine lathes have compound rests, three have taper attachments, and one is fitted with a turret and a large number of special tools and fixtures which practically convert it into a manufacturing lathe, and serve to illustrate the methods of manufacture by duplicate parts.

For chipping and filing, eighteen benches are fitted with vises and each student is supplied with hammer, chisels, files and such other tools as he may need, and a locker in which to keep them. A gasoline engine is installed in one end of the shop, and is used for driving when the steam plant is not running. The tool room is supplied with general machinist tools, such as chucks, drills, reamers, taps, dies, gauges, jigs, and special tools. A convenient room is supplied with lockers for keeping clothes, and basins supplied with hot and cold water for the use of the students. The different shops are equipped with electric lamps, and current is furnished when necessary.

V. Mining Engineering, Geology, Mineralogy.—The Department of Mining and Geology occupies parts of the first and third floors on the east wing of the Engineering Building. On the third floor the department occupies four rooms and office. The four rooms are all of about the same size, occupying about 960 square feet of floor space each: (1) lecture and recitation room, (2) mineralogical laboratory, (3) geological exhibit room, (4) drafting room. The class room has a seating capacity of sixty-four. The drafting room can accommodate twenty simultaneously. Here instruction is given in mechanical drafting, the calculation and plotting of field notes and in graphical design of mine structures.

In the mineralogical laboratory there are accommodations for thirty-six. Each student is supplied with drawer, locker, and the necessary equipment for studies in crystallography, mineralogy and lithology. In the exhibit room adjoining is maintained a good type collection of minerals and lithological specimens as well as working specimens. There is also a collection of fossils and casts illustrating historical geology. Other equipment of the geological department consists of wooden, transparent, and skeleton crystal models; specific gravity balan-

ces; contact and reflecting goniometers; a petrographic microscope and slides for both microscope and stereopticon lanterns.

VI. Ore Dressing.—The ground floor is occupied entirely by the metallurgical laboratory. The laboratory is well equipped with ore dressing plants. The concentrating plant consists of a gyratory crusher, two sets of roll crushers, two bucket elevators, four trommels or revolving screens, two classifiers, four Hartz jigs and a seven-foot Wilfley concentrating table.

The stamp mill is of full size Nissen type, circular discharge and interior amalgamating plate. The outside amalgamating plate is full size, being ten feet long. The stamp mill and concentrating plant are fed from their respective bins by two different types of automatic feed. The ore before entering the bin is crushed to proper size by a Blake jaw crusher. The model cyanide plant illustrates the leaching department of the cyanide process and the extractor box work. It consists of one solution tank, two sand tanks, with false bottoms and filters, one gold tank, and a set of extractor box compartments of the up-flow type.

Besides the equipment already mentioned there is an automatic sampler. The cement floor in this department gives a good surface for illustrating coning and quartering in the process of hand sampling.

A twenty-horse power motor is the source of power for this laboratory. Shafting, belting and gears of various kinds transmit the power to the various machines so that a large variety of mechanism is illustrated.

VII. Mechanical Drawing and Machine Design.—The department of mechanical drawing and machine design is supplied with equipment for teaching mechanical drawing, descriptive geometry, kinematics and machine design.

A convenient cabinet is supplied with a complete set of Schroeder's descriptive geometry models for demonstrating the principles of descriptive geometry and mechanical drawing. A small reference library and a library of selected catalogues of manufacturers, which is being established for the use of students in advanced machine design, occupy a suitable case. A Beck vertical wall file, 36 x 48 inches, for filing commercial blue prints, is filled with selected blue prints furnished by prominent manufacturers, and is made use of by students in machine design.

A number of kinematic models and a large collection of engineering specialties, sectioned to show interior, which were donated by the various manufacturers, occupy a sectional case, and are used in elementary work in machine design and mechanical drawing. The filing envelopes, which contain the

students' drawings, are kept in alphabetical arrangement in a case of drawers.

This department is equipped with an outfit for making blue prints, consisting of two sun printing frames 18 x 24 inches and 30 x 42 inches, each mounted on a car and track and suitable conveniences for washing and drying the prints.

All students in the lower classes are required to take drawing, a study which tends to discipline the mind, as well as to train the eye and hand to accuracy of observation and execution. Four large well-lighted drawing rooms which will accommodate (at one period) two hundred and fifty students, are provided with tables, lock boxes, etc. The drawing rooms have been equipped with one hundred and fifty new drawing tables of the most modern pattern.

VIII. Architecture.—The department of architecture is provided with four well lighted rooms in the Main Building. The drafting room is open from 8:00 A. M. to 10:00 P. M., and each student has his own table to which he may come at any time, and a steel locker for materials; members of all classes are together in this room, and the younger men find inspiration in the work of the older ones. The studio for freehand drawing and water color painting is furnished with adjustable tables, and a good collection of models and plaster casts of sculpture and architectural details.

The architectural library is conveniently located with respect to other rooms of the department, and the books, journals and drawings are freely accessible to students during working hours; under proper restrictions books may also be taken out for home use. The equipment of the lecture room includes a lantern and a carefully selected collection of slides. Quarters for clay modeling are fitted out in Broun Hall.

For advanced work in construction the department of architecture has at its disposal the resources of the various engineering laboratories. In the civil engineering testing laboratory the student investigates the properties of materials, such as cement, stone, brick and steel; in the mechanical laboratory he becomes acquainted with the processes involved in the heating and ventilation of buildings, and the operation of steam and gas engines; in the electrical laboratory he gains a knowledge of dynamo electric machinery, and methods of wiring and illumination of buildings.

On file in the office of the department is a growing collection of working drawings and specifications contributed by practicing architects. A practically permanent display of rendered drawings is maintained on the walls, student problems in design being hung as completed for purposes of inspection and criticism.

COLLEGE OF AGRICULTURAL SCIENCES.

IX. Practical Chemistry.—The chemical apparatus recently purchased for the chemical laboratory consists of a full supply of the most improved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to the first class laboratories, there have been imported a new and improved Schmidt and Heinsch's polariscope, ten short-arm balances of latest pattern, Bunsen's spectroscope, Abbe refractometer, and other instruments for delicate and accurate work.

The investigations that are undertaken in this laboratory by scientific experts in connection with the work of the agricultural experiment station, are of special value to advanced students, and afford them unusual opportunities to learn the methods of scientific research.

The building contains a large general laboratory that accommodates eighty students, a special laboratory for seniors that will accommodate forty students, a lecture room with a capacity of one hundred and fifty seats, and nine other rooms, all appropriated to instruction and research in chemistry.

The State chemical laboratory for the official analysis of fertilizers is connected with this department.

X. Agriculture.—The agricultural experiment station established in connection with the Institute, where experiments and scientific investigation relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professors in the field where lectures are delivered in the presence of the objects discussed, and during the year exercises in practical agriculture of an educational character are given the students who enter upon this course of study.

The farm contains 304 acres.

XI. Botany.—The department of Botany occupies the western half of the third floor of Agricultural Hall. The rooms in use include a lecture room having seats for sixty-four students, a general laboratory accommodating forty-five students, a smaller laboratory for bacteriology and pathology accommodating twenty students, two small laboratories for professors and advanced students, two offices, a dark room, and store room. The general laboratory is supplied with microscopes, glassware, and the general equipment of apparatus and materials necessary for gross and microscopic work in plant morphology. The equipment for work in plant physiology and pathology has been very materially increased by the installation of much new

apparatus needed for quantitative work in these subjects. These additions include autoclaves, sterilizers, incubator, drying oven, automatic water still, constant temperature baths, and ovens, Kjeldahl nitrogen determination apparatus, distilling and extraction apparatus, and many smaller pieces. These accessions to the equipment provide facilities for accurate work, under controlled conditions, in the chemical phases of plant physiology and for cultural studies in bacteriology and plant pathology and permit expansion and development of the courses offered in these subjects to a degree commensurate with their importance.

The greenhouse of the department has a floor space 30 x 110 feet, with an adjoining laboratory room 30 x 30 feet. It is used for experimental work in plant pathology and plant physiology. The facilities provided are sufficient to permit the growth of ample material for class use in these subjects as well as for the investigation of special problems by the staff.

The botanic garden contains a fairly representative collection of the native trees and shrubs of the state, and it is planned to make a collection of native medicinal plants. A portion of the garden will also be used as an outdoor experimental plat for the growing of materials employed in the work of instruction or in research.

XII. Pharmacy.—The laboratory of this department occupies the first and second floors of the annex to the chemical laboratory, and is provided with a sufficient supply of drugs and apparatus necessary for instruction in pharmaceutical preparations. The equipment for the laboratory includes a Laurent Polariscopes, a Pulfrich refractometer, a vacuum distilling and drying apparatus, consisting of $\frac{1}{2}$ horse power air pump, vacuum chamber, condenser, and Bruhl receiver for fractional distillation under diminished pressure, a three-horse power electric motor, a complete outfit for organic combustion work, and three chemical balances.

On the third floor is located the lecture room, storeroom, and drug mill room.

The new pharmaceutical laboratory on the basement floor of the pharmaceutical building is fitted with steam and has a full equipment for research work in pharmaceutical chemistry.

The students work in the laboratory with the professor from five to eight hours, six days in a week.

XIII. Horticulture.—A well-lighted and heated one-story brick building adjoins the greenhouses. It affords space for about 40 students at one time for practical work in grafting, seed germination, seed testing, transplanting, grading, packing, spray mixing, etc. It contains also a complete equipment for instruction in canning. The two greenhouses, 20 x 80 feet are modern in

construction. They contain a varied collection of the leading bedding and decorative plants, and afford facilities for practical instruction in plant propagation, the forcing of vegetables and cut flowers, and greenhouse management. Hot beds and cold frames of cement construction are also at hand. Instructors also make use of the experimental orchards, vineyard, garden, and ornamental plantings on the grounds of the department for practical instruction. Accurate experiments in the culture of various fruits and vegetables adapted to the state are constantly in progress. The departmental library embracing many of the standard works, magazines, bulletins and other equipment are accessible to advanced students under the usual regulations.

XIV. Entomology, Zoology.—The department for teaching these subjects is located on the first floor of Comer Hall. A combined lecture and laboratory room provides accommodation for 70 men at a lecture or 25 in laboratory work. It is well equipped with apparatus for microscopic and dissection work, and to supplement this, charts, models and preserved specimens of invertebrate animals are used.

In addition the course in Entomology has at hand in the station laboratory, adjoining the class room, a valuable and growing collection of insects especially of the economic species of Alabama. In connection with the range of greenhouses there is also a large workroom for experimental and demonstrational work with insecticides and an insectary 16 x 40 feet within which the study of insect problems may be conducted at any time under controllable conditions. This room is also used in connection with the college apiary to demonstrate equipment and apparatus as used in modern bee-keeping, a part of the course in Entomology. The farm, orchards, vineyards and truck gardens afford a convenient opportunity for the observation, study and control of such economic pests as may occur therein. The student in Entomology is made familiar with several types of hand and power spraying and dusting apparatus, also spraying accessories which are recognized as essential in successful agriculture.

A reference library, containing general and standard works upon entomology and zoology and publications of the government and State experiment station is accessible to students.

XV. Animal Husbandry.—The animal husbandry farm contains about 260 acres; upon this farm is a dairy barn which accommodates eighteen cows, and a beef cattle shed. The students visit the barns and sheds with the instructors and are thus afforded an opportunity to study the various breeds of live stock and to do stock judging work. In addition to the pure

breeds of cattle and swine upon the farm, there is always graded and scrub animals which are used in experimental work in feeding, breeding, etc. All of this stock is used in instructional work.

ACADEMIC WORK.

XVI. History.—All advanced work in history is conducted by the laboratory method. This plan has been successfully employed in the junior, the senior, and the graduate classes. A large and well-lighted room has been set apart for this work in the new library building, where all the resources of the rapidly growing library are easily accessible. This room is equipped with maps, diagrams, charts and suitable tables and chairs. The library is a depository for all government publications. These and other books on American history, with which it is well supplied, offer abundant material for research work in the history of our country. The publications collected by the experiment station constitute valuable material for study in industrial history.

XVII. Physics.—The physical laboratory occupies two rooms one of these being permanently darkened for experimental work in light. It is equipped with numerous standard instruments of precision, such as verniers, micrometers, cathetometers, an horizontal comparator, a Kater's revision pendulum, balances, etc., and a quantity of minor apparatus. Recently there have been added a concave grating spectrograph, a large induction coil of 12-inch spark, and other apparatus of value.

XVIII. Military Tactics.—Instruction in this department is given in conformity with the Act of Congress. Students receive the benefit of regular military drill, and in addition, the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties. The department is supplied with cadet rifles and accoutrements for the corps.

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

XIX. Physiology and Veterinary Science.—The veterinary department occupies a separate two-story building with nine rooms. It is provided with lecture room, office, working and operating rooms for clinical practice, thoroughly equipped laboratories for work in bacteriology, milk and meat inspection, and with museum containing skeletons of the domestic animals for instruction. Free clinics are given every Saturday for the benefit of the students in veterinary science.

There is a separate dissecting room with cement floor and north roof light, constructed especially for this department. This laboratory is used by the professor and students each afternoon for three months.

BUILDINGS.

The Main Building is 160 x 71 feet, and contains forty-five rooms. It contains lecture rooms, administration offices, physical laboratory, museum, armory, etc.

LANGDON HALL.

This is a two-story building 90 x 50 feet. The second story is the audience hall, used for commencement and other public occasions.

POWER HOUSE AND SHOPS.

The first story of Langdon Hall is appropriated to the laboratory of first year wood work in mechanic arts.

The machine shop, forge shop, foundry, and boilers are installed each in separate buildings. A handsome building, two-stories in height, pressed brick and stone trimmings, has been constructed for occupation by the power plant on the first floor and by the pattern making department on the second floor. The dynamo laboratory occupies a separate building.

A commodious boiler house has been built. It is of fire-proof construction and is supplied with track and cars for handling coal from the bin to the boiler. Scales are provided for keeping accurate account of the coal consumed.

BROUN ENGINEERING HALL.

The alterations and additions to the William LeRoy Broun Engineering Hall were completed and the building occupied in September, 1910. The finished structure is 250 feet long, 50 to 90 feet deep, and three and four stories in height, enclosing a floor area of 43,500 square feet. In construction this building is practically fire proof and in exterior design conforms in general to the other buildings on the campus. The walls are laid up in selected red brick, with limestone and terra cotta trimmings.

Offices, lecture rooms, and laboratories for the departments of mechanical, electrical, mining and civil engineering, machine design and drawing, are located within this building, and all the interior accommodations are especially arranged to facilitate the special work of each department.

This building was designed and superintended by the department of architecture.

CHEMICAL LABORATORY.

The Chemical Laboratory is a two-story structure, 40 x 60 feet, with a rear projection, 35 x 60 feet, of one-story and basement, and contains eight rooms. The exterior is of pressed brick, with cut stone trimmings and extra terra cotta ornamentations.

ANNEX TO CHEMICAL LABORATORY.

This is a three-story brick building containing rooms and laboratories for the department of pharmacy.

The chemical laboratory for the agricultural experiment station occupies a building 60 x 26 feet, and is appropriated exclusively for chemical investigation and research.

SMITH HALL.

The Otis D. Smith Dining Hall, constructed of stone and pressed brick, is two stories in height, and one hundred and forty feet in length. It will accommodate three hundred in the dining hall, and forty in the dormitory above. The style is semi-colonial.

CARNEGIE LIBRARY.

The library building is a handsome structure of classical outline, monumental in its general effect.

AGRICULTURAL BUILDING.

A handsome and commodious building is occupied by the departments of (1) agronomy, (2) horticulture, (3) botany, (4) entomology, and (5) animal husbandry, together with a separate set of buildings for practical work in each of these departments. It is the general opinion that there is no superior, if equal, group of buildings for agricultural purposes in the South. The building is three stories in height and is constructed of pressed brick with stone trimmings.

ALUMNI GYMNASIUM.

The central unit of the Gymnasium presented to the College by the Alumni was dedicated February 22nd, 1916. It is an attractive three-story structure, 110 x 60 feet, built of brick and stone. The first floor contains the dressing rooms and showers for the athletic teams, the students' lockers and showers being located on the second floor. The main Gymnasium hall is on the third floor.

It is planned to complete the building at an early date.

REQUIREMENTS FOR ADMISSION

APPLICATION.

All applicants for entrance to any department of the College should make application to the Registrar as early as possible before the opening of the session (September 12, 1917). Those who desire to be admitted by certificate should make application as soon as possible after their graduation from the High School. To all applicants a blank will be furnished which they are expected to fill out and file with the Registrar in advance of entrance.

All applicants for admission must present testimonials of good moral character, and those who come from other colleges must bring certificates of honorable discharge or furnish other testimonials of good moral character.

Entrance examinations will begin on Monday, September 10th. These examinations will be required of all students entering college for the first time, except those who bring certificates from accredited high schools or preparatory schools or from reputable colleges or universities.

REGISTRATION.

Students upon their arrival in Auburn should report promptly to the President.

All students are required to register on the first day of the session and on the opening day after the Christmas vacation. Registration at a later date involves additional administration work to the College and seriously affects the work of the student. An additional fee of \$2.00 will be charged for registration after September 15th and January 2nd. No exception will be made to this regulation.

All students, whether applicants for regular or irregular courses, are required to report for classification to the Chairman of the Committee on Entrance Examinations who will give them cards of admission to the classes to which they are assigned.

ADMISSION TO THE FRESHMAN CLASS.

To enter the freshman class the applicant must be not less than fifteen years of age.

For unconditional admission to any bachelor's course, or to the Veterinary College, a student will be required to present fourteen entrance units.

A unit is defined as a high school or preparatory course of five periods of forty or forty-five minutes each, weekly, throughout the academic year of nine months. In science courses, two laboratory periods are counted as the equivalent of one

recitation period. Credits of less than one unit may be granted for courses that do not run full time. No more than four units will be given for one year's work in the high school.

Students who wish to enter the regular courses and are deficient in entrance requirements may enter and be classified as conditioned students, provided their deficiencies do not exceed two units.

For entrance to any of the special courses that do not lead to degrees, applicants must give evidence of satisfactory preparation for pursuing the work as outlined in the catalogue. In accordance with the requirements of the American Conference of Pharmaceutical Faculties, for entrance to the two-year course in pharmacy leading to the degree of Graduate in Pharmacy, at least two years of high school work are required. Fourteen entrance units are required for admission to the three-year course in pharmacy leading to the degree of Pharmaceutical Chemist.

For entrance to the two-year special course in architecture no examination is required, but the applicant must be not less than twenty-one years of age and have had a satisfactory experience in the office of a practicing architect. He must show by drawings that he possesses a working knowledge of the "Orders" and satisfy the department that his preparation in other lines has been adequate to enable him to carry the work with success.

Of the fourteen units required for admission in full standing to the freshman class, seven and a half are prescribed as follows:—

Mathematics $3\frac{1}{2}$ units:

High School Arithmetic.

Algebra, complete.

Plane and Solid Geometry.

English 3 units:

High School Grammar.

Rhetoric and Composition.

History of American or English Literature.

Classics.

High School History of the United States 1 unit.

ENTRANCE SUBJECTS.

Credit for admission will be given for any high school subject properly taught.

Algebra	$1\frac{1}{2}$ units	Rhetoric and Composition	$1\frac{1}{2}$ units
Advanced Arithmetic	$\frac{1}{2}$ unit	History of American or English Literature	1 unit
Plane Geometry	1 unit	Advanced U. S. History	1 unit
Solid Geometry	$\frac{1}{2}$ unit		
Trigonometry	$\frac{1}{2}$ unit		
High School Grammar	$\frac{1}{2}$ unit		

Ancient History	1	unit	Physiology	1/2	to 1 unit
Mediaeval and Modern History	1	unit	Biology	1/2	to 1 unit
English History	1	unit	Physics	1/2	to 1 unit
Pedagogy	1/2	unit	Chemistry	1/2	to 2 units
Psychology	1/2	unit	Botany	1/2	to 1 unit
French	1 to 2	units	Civil Government	1/2	to 1 unit
German	1 to 2	units	Shop Work	1/2	to 2 units
Spanish	1 to 2	units	Mechanical Drawing	1/2	to 2 units
Latin Grammar	1	unit	Freehand Drawing	1/2	to 1 unit
Caesar	1	unit	Music	1/2	to 3 units
Cicero	1	unit	Bookkeeping	1/2	to 1 unit
Virgil	1	unit	Stenography and Typewriting	1/2	to 1 unit
Greek	1 to 2	units	Domestic Science	1/2	to 2 units
Commercial Geography	1/2	unit			
Physical Geography	1/2	unit			
Agriculture	1/2	to 2 units			
Zoology	1/2	to 1 unit			

ADMISSION BY CERTIFICATE.

Students presenting official statements from the schools listed below will be given entrance credit for all work completed. Those having 14 units will be admitted to full standing in the freshman class. Those having 12 units will be classed as conditioned freshmen, and the remaining 2 units must be removed by the beginning of their junior year. Not more than four units will be given for any one year's school work.

All students are strongly advised to complete the full course given in their schools before applying for admission to college.

CERTIFICATE SCHOOLS.

1. State Normal Schools.
2. District Agricultural Schools and County High Schools.
3. The following city, denominational and private schools in Alabama:

Alabama City High School, Alabama City	J. D. Bradley
Albany High School, Albany	R. W. Cowart
Alexander City High School, Alexander City	J. M. Pearson
Andalusia High School, Andalusia	L. E. Brown
Anniston High School, Anniston	D. R. Murphey
Green University School, Athens	W. K. Green
Bay Minette High School, Bay Minette	S. M. Tharpe
Bessemer High School, Bessemer	A. A. Persons
Central High School, Birmingham	C. A. Brown
University High School, Birmingham	J. J. White
High School, Boaz	J. C. McAuley
Snead Seminary, Boaz	L. F. Corley
Brewton High School, Brewton	W. L. Porter
High School, Camp Hill	J. E. Middlebrooks
Industrial Institute, Camp Hill	L. Ward

Carrolton High School, Carrolton.....	O. G. Meyers
High School, Citronelle.....	B. H. Johnston
High School, Collinsville.....	H. G. Tiller
Cordova High School, Cordova.....	G. E. Hill
High School, Cuba.....	J. M. Davis
Decatur High School, Decatur.....	J. M. Collier
Demopolis High School, Demopolis.....	K. G. Hoover
Dothan High School, Dothan.....	P. W. Hodges
High School, Elba.....	J. F. Scofield
High School, Ensley.....	L. F. Banks
Eufaula High School, Eufaula.....	H. L. Upshaw
Eutaw High School, Eutaw.....	A. F. Jackson
High School, Florence.....	W. B. Harrison
Gadsden High School, Gadsden.....	W. C. Griggs
Geneva High School, Geneva.....	J. E. Cheatham
Georgiana High School, Georgiana.....	P. B. Pepper
High School, Gordo.....	R. R. Rockett
Greenville High School, Greenville.....	C. B. Gamble
Haleyville High School, Haleyville.....	L. L. James
Goodrich School, Huntsville.....	J. C. Goodrich
Huntsville High School, Huntsville.....	R. C. Johnston
LaFayette High School, LaFayette.....	F. T. Appleby
High School, Lanette.....	W. L. Leatherwood
Linden High School, Linden.....	A. F. Riser
High School, Livingston.....	R. K. Hood
Luverne High School, Luverne.....	A. C. Reagan
High School, Madison.....	T. G. Riddle
Mobile High School, Mobile.....	S. S. Murphy
University Military School, Mobile.....	J. T. Wright
Sidney Lanier High School, Montgomery.....	C. L. Floyd
Barnes' School, Montgomery.....	E. R. Barnes
Edgar's School for Boys, Montgomery.....	R. B. Edgar
University School, Montgomery.....	J. M. Starke
Baptist Collegiate Institute, Newton.....	A. W. Tate
High School, Opelika.....	S. O. White
Opp High School, Opp.....	P. A. McDaniel
High School, Ozark.....	E. T. Laney
High School, Pine Apple.....	C. H. Newson
Roanoke High School, Roanoke.....	L. L. Vann
High School, Samson.....	W. B. Spear
High School, Selma.....	A. F. Harman
High School, Sheffield.....	W. P. Johnson
Slocomb High School, Slocomb.....	E. C. Palmer
High School, Stevenson.....	N. H. Price
High School, Sulligent.....	W. V. Luckie
Talladega High School, Talladega.....	D. A. McNeill
Thomasville High School, Thomasville.....	H. M. Morrow

Thorsby Institute, Thorsby.....	John Savage
Unity-Chilton Baptist High School, Thorsby.....	J. A. Pool
High School, Troy.....	Jno. R. McLure
High School, Tuscaloosa.....	J. W. Foster
Tuscumbia High School, Tuscumbia.....	J. F. Collins
Tuskegee High School, Tuskegee.....	R. E. Thompson
Union Springs High School, Union Springs.....	E. S. Pugh
High School, Uniontown.....	E. Kilpatrick

4. Schools in other States which are accredited to institutions of equal rank with the Alabama Polytechnic Institute.

ADVANCED STANDING.

Advanced standing in any subject is not given on preparatory school credits, and can be obtained only by an examination conducted by the professor of that subject.

Advanced standing is given for work done in other colleges of similar rank, and for work done by graduates of the State Normal Schools at Florence, Jacksonville, Livingston and Troy, of Marion Institute, of Highland Home College, St. Bernard College, of Spring Hill College and the Alabama Presbyterian College, of Anniston.

ADMISSION OF YOUNG WOMEN.

Young women of mature mind and character, who are at least seventeen years of age, will be admitted. Upon the approval of the faculty, applicants may be admitted at an age less than seventeen years if a resident of Auburn will act as guardian.

The only conditions imposed will be that they engage in earnest study and attend the exercises regularly. They will board in town with private families, and will attend college only at the hours of their exercises.

NUMBER OF EXERCISES REQUIRED.

All students are required to have *not less than fifteen* recitations per week, or the equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week, and in all, give twenty-seven to thirty hours per week required in college exercises.

Students shall not be permitted to take more than *five hours* of extra work without special permission of the faculty.

SPECIAL AND IRREGULAR STUDENTS.

Those students who are not able to meet the regular entrance requirements may be admitted to special courses in agriculture, architecture, engineering, chemistry, pharmacy, etc., and will be classified as special or irregular students, provided they are

prepared to do satisfactory work in the subjects which they desire to take.

The privilege of taking irregular courses will be granted only to those students who are of age or to those whom for special reasons the faculty may grant permission. Students who are not of age will not be permitted to enter a special or irregular course without the written permission of parent or guardian.

A student to whom this privilege has been granted will be assigned to some member of the faculty who will act as his adviser in regard to his work. The professor in charge of a department will decide whether a special student is prepared for admission to his class.

Those students who are candidates for a degree, but who are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greatest number of studies.

REMOVING CONDITIONS.

At the beginning of each term examinations will be given to those students who wish to remove entrance conditions.

CHANGES IN COURSE.

Special and irregular students may be transferred to any regular course by presenting satisfactory entrance requirements and by standing satisfactory examinations on all the work which they have not taken in that regular course.

Students who change from one regular course to another will be required to make up satisfactorily to the heads of the departments concerned all the work in the new course that they have not had.

Permission to change from one course to another will not be granted within two weeks of any term or mid-term examination.

ADMISSION FROM OTHER COLLEGES.

Students coming from another college of similar rank will be assigned to the class to which they would belong in the institution which they have left, and will be required to make up only such back work in the course to which they are assigned as is necessary in order to carry on the regular studies of their class.

COURSES OF INSTRUCTION.

The courses of study include the physical, chemical and natural sciences, with their applications; agronomy, botany, animal husbandry, horticulture, mechanics, astronomy, mathematics, drawing, civil, electrical, mechanical and mining engi-

neering; architecture; physiology, and veterinary science; pharmacy; English, French, German, Spanish and Latin languages; history, political economy; mental and moral sciences; education.

The studies are arranged in regular courses so as to offer liberal and practical education as a preparation for the active pursuits of life.

There are eleven degree courses for undergraduates, leading to the degree of Bachelor of Science (B. S.) each requiring four years for its completion:

- I. COURSE IN CIVIL ENGINEERING.
- II. COURSE IN ELECTRICAL ENGINEERING.
- III. COURSE IN MECHANICAL ENGINEERING.
- IV. COURSE IN MINING ENGINEERING.
- V. COURSE IN ARCHITECTURE.
- VI. COURSE IN ARCHITECTURAL ENGINEERING.
- VII. COURSE IN CHEMISTRY AND METALLURGY.
- VIII. COURSE IN AGRICULTURE.
- IX. COURSE IN PHARMACY.
- X. COURSE IN CHEMICAL ENGINEERING.
- XI. GENERAL COURSE.
- XII. FOUR-YEAR COURSE IN VETERINARY MEDICINE (D. V. M.)
- XIII. THREE-YEAR COURSE IN PHARMACY (Ph. C.)
- XIV. TWO-YEAR COURSE IN PHARMACY (Ph. G.)
- XV. TWO-YEAR COURSE IN MECHANIC ARTS.
- XVI. TWO-YEAR COURSE IN AGRICULTURE.
- XVII. TWO-YEAR COURSE IN APPLIED ELECTRICITY.
- XVIII. COURSE FOR ROAD FOREMEN AND INSPECTORS.
- XIX. ONE-YEAR COURSE IN WIRELESS TELEGRAPHY.
- XX. TWO-YEAR COURSE IN MINING.
- XXI. TWO-YEAR COURSE IN ARCHITECTURE.

Special Course in Agriculture.—Young men over twenty-one years of age who desire to study agriculture will be permitted without examination to enter classes in agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied. They may attend the lectures in agriculture in all the classes and engage in the practical work at the experiment station, in the field, stock-yard, dairy, garden, orchard, vineyard, etc., and may thus in one year acquire valuable practical knowledge of scientific agriculture.

Course I. includes the principles and applications of the sciences that directly relate to civil engineering, and is adapted to those who expect to enter that profession.

Course II. includes, besides the general principles and applications of the sciences, a special course in the applications of

electricity and mechanics, and is arranged to fit men for the profession of electrical engineering.

Course III. furnishes instruction in steam engineering, materials of construction, drawing and machine design, electrical engineering, together with laboratory work. The course is intended to qualify men to fill positions in the manufacturing industries.

Course IV. includes theoretical and practical instruction in geology, mineralogy, chemistry, civil and electrical engineering, as applied to mines, mapping, exploration, boring, ventilation, timbering, and all the operations pertaining to the profession of mining engineering.

Courses V. and VI. have been arranged to give theoretical and practical knowledge of architecture in order to enable students to take advantage of office opportunities upon graduation. It embraces architectural drawing and design, history, and ornamental architectural engineering, and office practice.

Course VII. provides for thorough theoretical and practical instruction in pure and technical chemistry and metallurgy, and in scientific branches relating thereto. Students taking this course also pursue the study of German or French during the junior and senior years, and are thus prepared to utilize for reference and for study, scientific journals and works published in those languages.

Course VIII. includes theoretical and practical instruction in those branches that relate to agronomy, horticulture, animal husbandry, botany and entomology, and is especially adapted to those who intend to devote themselves to agricultural and horticultural pursuits.

Course IX. includes, besides the general education of Course XI. of the lower classes, a special course in pharmacy and chemistry, and is adapted to those who expect to become pharmacists, manufacturing chemists, or to enter upon the study of medicine.

Course X. has been arranged for students who desire preparation for chemical engineering work with special reference to planning, construction and operation of plants employed in the chemical industries, such as manufacture of fertilizers, sugars, ceramics, oils and fats, and their products, coal by-products, etc., etc.

Course XI. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as those who intend ultimately to engage in teaching or in some commercial or professional business.

Course XII. has been established to meet the demand of the young men of the South who desire to become educated veter-

inarians, and for students who desire to prepare for the study of human medicine.

The shorter courses have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years, and to take one of the regular degree courses.

DEGREES.

Each applicant for a degree must submit his application and course of study by the first of October in his senior year.

No degree will be conferred upon a candidate *in absentia* unless he is officially excused for providential reasons.

The degree Bachelor of Science will be granted to those students who satisfactorily complete one of the regular four-year courses.

A student who completes the work of the two-year course in pharmacy and submits a satisfactory thesis will be granted the degree of Graduate in Pharmacy (Ph. G.)

A student who completes the work of the four-year course in veterinary medicine and submits a satisfactory thesis, will be granted the degree of Doctor of Veterinary Medicine (D. V. M.)

A student who completes the work of the three-year course in pharmacy and submits a satisfactory thesis, will be granted the degree of Pharmaceutical Chemist (Ph. C.)

CERTIFICATES.

A student who completes satisfactorily all the work of the senior class in a department, including the laboratory work, with approval of the faculty, may be awarded a certificate of proficiency in that subject.

Students who complete one of the two-year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

No certificate of proficiency will be given in any course unless the applicant has passed a satisfactory examination in elementary English. Every applicant for a certificate will be required to stand this special examination during the final year.

GRADUATE COURSES.

A more extended course of study may be taken by a graduate of this institution or of any college of equal grade. The completion of a course which leads to a post-graduate degree of Master of Science requires one year's residence, spent in the satisfactory prosecution of a course of study, with such laboratory work as may be approved by the faculty.

The candidate must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to his course, and must pass an examination at the

close of each term, on the course of study prescribed, in which he must attain a grade of 75 per cent. The examination is written, and also oral in the presence of the faculty.

The subject for the thesis must be submitted to the faculty for approval prior to January first, and the thesis given to the professor by May first.

Applicants for a post-graduate degree and special students in post-senior studies are subject to the same general regulations as other students, and *pay the same fees*, but are exempt from all military duty.

The following courses are prescribed for the degrees named:

1. *Master of Science*.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class; or in special cases, with the approval of the faculty, a student may devote his full time to work in two departments, in each of which he has completed the full senior course.

2. *Master of Science in Pharmacy*.—Pharmacy and Chemistry.

PROFESSIONAL DEGREES IN ENGINEERING.

1. *Degrees in Course*.—The professional degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, Chemical Engineer, or Engineer of Mines will be conferred upon graduate students upon the satisfactory completion of the course of study prescribed, a residence of one year at the institute being required for the completion of those courses.

A written application stating the degree desired and the course of study selected must be submitted to the faculty at the beginning of the session. A satisfactory thesis must be submitted by May first.

The following courses of study are prescribed for the degrees named:

Civil Engineer.—Civil Engineering and any two subjects selected from the following: Mathematics, analytical mechanics, mechanical engineering, electrical engineering, mining engineering, bacteriology.

Electrical Engineer.—Electrical engineering and mechanical engineering, or electrical engineering, mathematics and civil engineering.

Mechanical Engineer.—Mechanical engineering and machine design, or mechanical engineering, mathematics and mining engineering.

Chemical Engineer.—Electro-chemistry and advanced analytical or organic chemistry, together with one or more subjects selected from the following: Mechanical engineering, machine design, electrical engineering, mining engineering.

Engineer of Mines.—Graduate students who have completed

the course in mining engineering may apply for this degree. The subjects to be pursued are mining engineering, civil engineering, and one other technical subject relating to mining and metallurgy, and approved by the faculty.

II. Degrees for Professional Work.—The above named professional degrees may be conferred upon graduates of the Alabama Polytechnic Institute in civil, electrical, mechanical, chemical and mining engineering, upon complying with the following requirements:

1. The candidate must have spent at least four full years in the practice of that branch of engineering in which he graduated.

2. An approved thesis must be submitted to the faculty not later than May 1st of the year in which the degree is sought.

3. The student must show that he has filled satisfactorily a responsible position in charge of important engineering work. Written testimonials from employers or clients will be accepted as evidence of satisfactory service.

4. A written application, stating the degree desired, and giving a report or outline of the professional work upon which the application is based, must be submitted not later than January 1st of the year in which the degree is to be granted.

III. Special Students in Graduate Studies.—Students who are not graduates, but are qualified in special subjects to prosecute graduate studies, and desire to prepare themselves more thoroughly for professional or special work in any of the departments of engineering, in chemistry, pharmacy, veterinary science, or other subjects in which instruction is given, may, when qualified, with approval of the faculty, enter this higher department of study and have all the privileges of post-graduate students.

A certificate of proficiency will be given when any one subject of a post-graduate course is satisfactorily completed.

Two degrees will not be given the same year.

LABORATORIES.

Laboratory instruction constitutes an important feature in the course of education provided for the students and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in the following departments:

- I. CIVIL ENGINEERING, FIELD WORK, SURVEYING, ETC.
- II. ELECTRICAL ENGINEERING, TELEPHONE ENGINEERING.
- III. MECHANICAL ENGINEERING.
- IV. MECHANIC ARTS.
- V. MINING ENGINEERING, MINERALOGY.
- VI. ORE DRESSING.

- VII. ARCHITECTURE, ARCHITECTURAL ENGINEERING.
- VIII. TECHNICAL DRAWING, MACHINE DESIGN.
- IX. CHEMISTRY, METALLURGY.
- X. AGRONOMY.
- XI. BOTANY.
- XII. PHARMACY, PHARMACEUTICAL CHEMISTRY.
- XIII. HORTICULTURE.
- XIV. ENTOMOLOGY, ZOOLOGY.
- XV. ANIMAL HUSBANDRY.
- XVI. HISTORY, LATIN.
- XVII. PHYSICS.
- XVIII. MILITARY TACTICS.
- XIX. VETERINARY SCIENCE, BACTERIOLOGY, PHYSIOLOGY.
- XX. WIRELESS TELEGRAPHY.

NOTE.—Special work in Latin or History may be taken by students in the general course as a substitute for laboratory work.

THE J. B. BERRY
OF THE
UNIVERSITY OF MICHIGAN

SCHEDULE OF EXERCISES

MONDAY.	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1. An. Husb. (1,2) 1. Econom. Geol. (1,3) 1. An. Chem. (Min.) 1. Bacteriology 1. Drawing 1. Elec. Engineering 1. German 1. Vet. Medicine (1,2) 2. Arch. History 2. Bacteriology (1,2) 2. Drawing 2. Gen. Path. (2,3) 2. Kinematics (1) 2. Education 2. Pharmacy 2. Horticultural Lab. 3. Agr. Chem. (3) 3. Zoology (1,2) 3. Surveying (1) 3. Latin 3. Mechanics (2,3) 4. Mathematics	1. Elec. Eng. 1. Infec. Dis. (1,2) 1. Drawing 1.2. Gen. Geology 2. Botany Lab. (Phar.) 2. Drawing 2. German 2. Str. Drafting (2) 2. Graphics 2. Machine Design 2. Mineralogy 2. Education 2. Obstetrics (1,2) 3. Agr. Chem. (3) 3. An. Husbandry (1) 3. Latin 3. Surveying (2,3) 1. Mathematics	1. An. Husb. (1,2) 1. Econom. Geol. (1,3) 1. Drawing 1. Elec. Eng. 1. German 1. Infec. Dis. (1,2) 1. Milk Inspec. (3) 2. Drawing 2. Kinematics (1) 2. Pharmacy 2. Graphics 2. Vet. Science 3. Agr. Chem. (3) 3. Zoology (1,2) 3. Surveying (1) 3. Ext. Anatomy 3. Latin 3. Mechanics (2,3) 4. Mathematics	1. Drawing 1. Elec. Eng. 1. Therapeutics (1,2) 1.2. Gen. Geology 2. Botany Lab. (Phar.) 2. Drawing 2. German 2. Education 2. Kinematics (1) 2. Mineralogy 3. Histology 3. Latin 3. Qual. Chem. 4. Mathematics	1. Plant Path. (1,2) 1. Drawing 1. Elec. Eng. 1. German 1. Infec. Dis. (1,2) 1. Milk Inspec. (3) 1.2. Gen. Geology 2. Drawing 2. Machine Design 2. Pharmacy 2. Theory of Arch. 2. Vet. Science 3. Zoology (1,2) 3. Agr. Chem. (3) 3. Surveying 3. Exterior Anatomy 3. Mechanics (2,3) 3. Latin 4. Mathematics	1. Soils (1,3) 3. Public Speaking Military Drill
1. Bacteriology 1. Calculus 1. Horticulture 1. Elec. Eng. 1. Surgery (1,2) 2. Bacteriology (1,2) 2. Roads and Pavements (1) 2. Plant Physiology 2. Latin 2. Education 2. Mining Eng. 2. Gen. Path. (2,3) 2. Str. Drafting (2) 2. Graphic Statics (3) 3. English 4. Chemistry	1. Soils 1. French 1. Mech. Eng. 1. Metallurgy 2. Botany (Agr.) 2. Roads and Pavements (1) 2. Elec. Eng. 2. Mach D'sign (M.E.) 2. Mining Eng. 2. Str. Drafting (2) 2. Graphic Statics (3) 3. Desc. Geom. 3. Histology 3. Physiology 4. History	1. Calculus 1. Pharmacognosy 1. Horticulture 1. Vet. Medicine 2. An. Industry (3) 2. Roads and Pavements (1) 2. Graphic Statics of Mechanism 2. Elec. Eng. 2. Horticulture (1,2) 2. Latin 2. Education 2. Mining Eng. 2. Surgery (3) 2. Str. Drafting (2) 2. Graphic Statics (3) 3. English 3. Histology 4. Chemistry	1. Soils 1. French 1. Machine Design 1. Mech. Eng. 1. Metallurgy 1. Vet. Medicine 1. Vet. Science 2. Arch. History 2. Botany (Agr.) 2. Elec. Eng. 2. Roads and Pavements (1) 2. Mining Eng. 2. Str. Drafting (2) 2. Graphic Statics (3) 3. Botany Lab. (Phar.) 3. Qual. Chem. 3. An. Ind. (1) 3. Histology 4. History	1. Calculus 1. Horticulture 1. Vet. Science 2. An. Ind. (3) 2. Roads and Pavements (1) 2. Education 2. Horticulture (1,2) 2. Latin 2. Spanish 2. Machine Design 2. Mining Eng. 2. Str. Drafting (2) 2. Vet. Medicine 3. English 4. Chemistry	1. Arch. Drawing 1. Eng. Chem. 1. Machine Design (2,3) 1. Crops (1,3) 1. Farm Mach. (2) 2. Arch. Drawing 2. Pharmacy 1. Technical Writing (1)
1. An. Husbandry 1. Arch. Eng. 1. Bacteriology 1. Civil Eng. 1. Latin 1. Therapeutics (2,3) 2. Bacteriology (1,2) 2. Gen. Path. (2,3) 3. Physics 4. English	1. Civil Eng. 1. Elec. Eng. (Min. Mech.) 1. Entomology (1,3) 1. Forestry 1. Meat Inspection 1. Pharmacognosy 1. Telephone Eng. 2. Agr. Geology (1,2) 2. French 2. Mach. Design 2. Spec. and Bldg. Materials 3. An. Ind. 3. Agr. Chem. (3) 3. History 4. English	1. Arch. Eng. 1. An. Husb. 1. Civil Eng. 1. Eng. Contracts 1. Latin 1. Therapeutics (1,2) 1. Therapeutics (3) 3. Physics 4. English	1. Entomology (1,3) 1. Forestry (2) 1. Civil Eng. 1. Elec. Eng. (Min., Mech.) 1. Pharmacognosy 1. Telephone Eng. 1. Vet. Medicine 2. French 2. Practical Mech. 2. Agr. Geology (1,2) 2. Spec. and Bldg. Materials 3. Agr. Chem. (3) 3. History 3. Horticulture (3) 3. Histology 4. English	1. An. Husb. 1. Latin 1. Arch. Eng. 1. Civil Eng. 1. Pharmacognosy 2. Obstetrics (1,2) 3. Physics 2. Therapeutics (3) 3. Agriculture 4. English	1. Arch. Drawing 1. Machine Design 1. Farm Mach. (2) 1. Crops (1,3) 1.2,3. Clinics 2. Arch. Drawing 3. Surveying (1) 3. Qual. Chem. 3. Phys. Lab. 4. Surveying (2,3) Chemical Lab. Field Work Mechanic Arts Elec. Lab.
1. English (1) 1. Pol. Econ. (2,3) 2. Chem. Ind. and Org. 2. Horticulture (1,2) 2. Mathematics 2. Pharmacognosy 2. Vet. Medicine 3. Qual. Chem. 3. Arch. Drawing 4. Latin (2,3) 4. Mechanic Arts 4. Surveying (2,3)	1. Live St. Man. 1. Plant Path. (1,2) 1. Bacteriology 1. Physics 1. Phys. Chemistry 2. Spanish 2. Agriculture (1,3) 2. An. Industry (2) 2. Chem. (Org.) 2. Mathematics 2. Pharmacognosy 3. An. Husb. (3) 3. Drawing (Arch.) 3. Surveying (2,3) 4. Latin	1. English (1) 1. Pol. Econ. (2,3) 1. Therapeutics (Phar.) (3) 2. Spanish 2. Chemistry (Ind.) 2. Chem. (Org.) (2) 2. Gen. Path. (2,3) 2. Horticulture (3) 2. Mathematics 2. Pharmacognosy 3. Horticulture (3) 4. Surveying (2,3) 4. Mechanic Arts	1. Bacteriology 1. Physics 1. Phys. Chemistry 2. Agriculture (1,3) 2. An. Ind. (2) 2. Chemistry (Org.) 2. Mathematics 3. Botany (Vet.) 3. Desc. Geometry 3. Physiology 4. Latin	1. Military Science 2. Chemistry (Ind.) 2. Gen. Path. (2,3) 2. Horticulture (3) 2. Mathematics 2. Pharmacognosy 3. Botany 3. Drawing (Arch.) 4. Latin 4. Mechanic Arts 4. Surveying (2,3)	1. Plant Path. (1,2) 1. Machine Design 1. Pharmaceutical Lab. 1.2,3. Clinics 3. Mechanic Arts 3. Bot. Lab. (Phar.) 3. Phys. Lab. 3. Qual. Chem. 4. Surveying (2,3) 4. Mechanic Arts. Chemical Lab. Elec. Lab. Field Work
1. Civil Eng. 1. Agriculture 1. Botany 1. Chemistry (Theo.) 1. Drawing (Arch.) 1. French 1. Meat Inspection 1. Mechanical Eng. 1. Mining Eng. 1. Pharmacy 2. Spanish 2. Vet. Physiology 2. English 3. An. Husb. (3) 3. Mathematics 3. Qual. Chem. 4. Drawing 4. Mechanic Arts	1. Agronomy 1. Geology 1. Mech. Eng. 1. Pharmacy 1. Therapeutics (1,2) 2. Arch. History 2. English 2. Spanish 2. Vet. Physiology 3. Mathematics 3. An. Husb. (3) 3. Org. Chem. (1,2) 4. Chemistry	1. Civil Eng. 1. Drawing (Arch.) 1. Entomology (1,3) 1. Forestry (2) 1. Mech. Eng. 1. Milk Inspec. (3) 1. Mining Eng. 1. Pharmacy 1. Spec. Path. (1,2) 2. Chem. (Analyt.) 2. German 2. Vet. Medicine 3. Botany 3. Mathematics 4. Drawing 4. Mechanic Arts	1. Soils 1. Geology 1. Mech. Eng. 1. Meat Inspection 1. Pharmacy 2. English 2. Spanish 2. Graphics 2. Vet. Medicine 3. Org. Chemistry (1,2) 3. Mathematics 4. Drawing	1. Civil Eng. 1. Drawing (Arch.) 1. Mech. Eng. 1. Mining Eng. 1. Pharmacy 1. Surgery 1. Theoretical Chem. 2. Military Tactics 3. Histology 3. Mathematics 4. Drawing 4. Mechanic Arts	1. Plant Path. (1,2) 1.2,3. Clinics 3.4. Mechanic Arts Chemical Lab. Elec. Lab. Field Work
1. Civil Eng. Thesis (2) 1. Struc. Des. (1,3) 1. Entomology (1,3) 1. Forestry (2) 1. Mech. Lab. 1. Toxicology (3) 1.2,3. Anatomy Lab. 1.2,3. Chem. Lab. 1.2. Clinics (1,2) 1.2. Drawing (Arch.) 1.2. Elec. Lab. 2. Field Work (3) 1.2. Machine Work 2. Botany (Agr.) 2. Pharmacy 2. Str. Drafting (1) 2. Road Mat. Lab. (2) 3. An. Husb. (1,2) 3. Horticulture (3) 3. Desc. Geometry 3. Mechanic Arts 3. Phys. Lab. 4. Mechanic Arts 4. Surveying (2,3)	1. An. Husb. Lab. 1. Horticultural Lab. 2. Agriculture (1,3) 2. Botany (Agr.) (2) 2. Mineralogical Lab. 1.2,3. Anatomy 1.2. Clinics 1.2. Drawing (Arch.) 1.2. History 3. Botany 3. Mechanic Arts 3. Desc. Geometry 4. Mechanic Arts 4. Surveying (2,3) Elec. Lab. Military Drill	1. C. E. Thesis (2) 1. Struc. Des. (1,3) 1. Live St. Man. 1. Mech. Lab. 1. Plant Path. (1,2) 1. Toxicology (3) 1.2,3. Anatomy 1.2,3. Chem. Lab. 1.2. Clinics 1.2. Drawing (Arch.) 2. Field Work (3) 1.2. Machine Work 2. Botany (Agr.) (1,3) 2. An. Ind. Lab. (2) 2. Horticultural Lab. 2. Str. Drafting (1) 2. Road Mat. Lab. (2) 3. Agriculture (1,3) 3. An. Husb. (2) 3. Desc. Geometry 3. Public Speaking 3. Mechanic Arts 3. Phys. Lab. 4. Mechanic Arts 4. Surveying (2,3) Elec. Lab. Work.	1. Agriculture 1. Spec. and Bldg. Materials 1. Telephone Lab. 1.2,3. Anatomy 1.2. Clinics 1.2. History 2. Elec. Lab. 2. Horticultural Lab. 2. Mineralogical Lab. 3. Desc. Geometry 3. Mechanic Arts 3. Botany 4. Mechanic Arts 4. Surveying (1) Military Drill	1. C. E. Thesis (2) 1. Struc. Des. (1,3) 1. Horticulture (1) 1. Machine Design 1. Mech. Lab. 1. Toxicology (3) 1. An. Husb. (2) 1. Farm Engines 1.2,3. Anatomy 1.2,3. Chem. Lab. 1.2. Clinics 2. Field Work (3) 1.2. Machine Work 2. Botanical Lab. 2. Drawing (Arch.) 2. French 2. Graphic Stat. (2) 2. Str. Drafting (1) 2. Road Mat. Lab. (2) 3. Public Speaking 3. Zoology 3. Horticulture (3) 3. Mechanic Arts 3. Phys. Lab. 4. Mechanic Arts Elec. Laboratory 4. Surveying (2,3)	

COURSES OF INSTRUCTION

(Note:—The numbers in the Courses of Instruction refer to the subjects as described under "Description of Courses," pages 58 to 135 of this catalogue. The following abbreviations are used: Ac., Academic Departments; Eng., College of Engineering and Mines; Agr., College of Agricultural Sciences; Vet., College of Veterinary Medicine and Surgery; H. Wk., Hours per Week.)

English, German, French, Latin or Spanish, may be taken as language in freshman, sophomore, junior and senior classes, provided there is no conflict in schedule. Approved courses in Education may be substituted for language in junior and senior classes in all courses.

A student, who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

GENERAL COURSE.

FRESHMAN CLASS.

First Term.

	H. Wk.
English (Ac. 102a) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish ---	3
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) ----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish ---	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) ----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish ---	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) ----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

	H. Wk.
Latin (Ac. 210) or Spanish or Science -----	5
English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Physics (Ac. 504) -----	3
†Mathematics (Ac. 403) -----	5
Botany (Agr. 301) or other Science -----	6
Chemical Lab'y (Agr. 110a) or other Lab'y -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Latin (Ac. 210) or Spanish or Science -----	5
English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Physics (Ac. 504) -----	3
†Mathematics (Ac. 403) -----	5
Botany (Agr. 301) or other Science -----	6
Chemical Lab'y (Agr. 110a) or other Lab'y -----	6
Military Drill (Ac. 600) -----	3

Third Term.

Latin (Ac. 210) or Spanish or Science -----	5
English (Ac. 103c) -----	3
History (Ac. 204) -----	2
Physics (Ac. 504) -----	3
†Mathematics (Ac. 404) -----	5
Botany (Agr. 301) or other Science -----	6
Chemical Lab'y (Agr. 110a) or other Lab'y -----	6
Military Drill (Ac. 600) -----	3
†With approval of faculty other work may be substituted.	

JUNIOR CLASS.

First Term.

	H. Wk.
English (Ac. 107) (a) -----	3
Latin (Ac. 211) (a) or Civics --	3
French (Ac. 301a) (a) or	
Spanish -----	4
German (Ac. 305a) (a) -----	4
Education -----	3
Chemistry or other Science --	3
Military Tactics (Ac. 601) ----	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) (a) -----	3
Latin (Ac. 211) (a) or Civics --	3
French (Ac. 301b) (a) or	
Spanish -----	3
German (Ac. 305b) (a) -----	3
Education -----	3
Chemistry or other Science --	3
Military Tactics (Ac. 601) ----	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) -----	3

Third Term

English (Ac. 107) (a) -----	3
Latin (Ac. 211) (a) or Civics --	3
French (Ac. 301c) (a) or	
Spanish -----	4
German (Ac. 305c) (a) -----	4
Education -----	3
Chemistry or other Science --	3
Military Tactics (Ac. 602) ----	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) -----	3

(a) Approved course in Education may be substituted for one language.

(b) The student may substitute laboratory of any department of natural science for which he may be qualified.

SENIOR CLASS.

First Term.

	H. Wk.
English (Ac. 109) (a) -----	2
Education -----	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205) -----	3
French (Ac. 302a) or Span-	
ish (Ac. 310) (a) -----	4
German (Ac. 306a) (a) -----	4
Geology (Eng. 441) (a) -----	2
History Lab'y (b) (Ac. 206) --	6
Military Science (Ac. 603) ----	1

Second Term.

Economics (Ac. 2) (a) -----	2
Education -----	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205) -----	3
French (Ac. 302b) or Span-	
ish (Ac. 310) (a) -----	3
German (Ac. 306b) (a) -----	3
Geology (Eng. 441) (a) -----	2
History (b) (Ac. 206) -----	6
Military Science (Ac. 604) ----	1

Third Term.

Economics (Ac. 2) (a) -----	2
Education -----	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205) -----	3
French (Ac. 302c) or Span-	
ish (Ac. 310) (a) -----	4
German (Ac. 306c) (a) -----	4
Geology (Eng. 441) (a) -----	2
History Lab'y (b) (Ac. 206) --	6
Military Science (Ac. 605) ----	1

(a) Education may be substituted for one language or for Geology.

(b) The student may substitute laboratory of any department of natural science for which he may be qualified.

COLLEGE OF ENGINEERING AND MINES.

The following studies in the freshman class are prescribed in the courses in civil, electrical, mechanical, mining and chemical engineering, and chemistry and metallurgy.

FRESHMAN CLASS.

First Term.

	H. Wk.
English (Ac. 102a, c) -----	5
History (Ac. 201) -----	2

	H. Wk.
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

H. Wk.

Second Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

CIVIL ENGINEERING.

Surveying (Eng. 105):
Forty-eight hours per week for
four weeks immediately after
commencement in summer camp.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
R. R. Surveying (Eng. 104) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Mechanic Arts (Eng. 361) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
R. R. Surveying (Eng. 106) -----	4
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Mechanic Arts (Eng. 362) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 103c) -----	3
Mathematics (Ac. 404) -----	5
Higher Surveying (Eng. 103) -----	4
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4

H. Wk.

Physics (Ac. 504) -----	3
Mechanic Arts (Eng. 305) -----	5
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3
Surveying (Eng. 110): Forty- eight hours per week for four weeks immediately after com- mencement in summer camp.	

JUNIOR CLASS.

First Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Engines and Boilers (Eng. 323) -----	3
Roads and Pavements (Eng. 107) -----	5
Structural Drafting (Eng. 112) -----	6
*Machine Shop (Eng. 374) or Mineralogy (Eng. 431) -----	4
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Gas Engines (Eng. 324) -----	3
Strength of Materials (Eng. 322) -----	3
Road Materials Lab'y (Eng. 108) -----	4
Structural Drafting (Eng. 112) -----	5
*Machine Shop (Eng. 374) or Mineralogy (Eng. 432) -----	4
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Trans. Power (Eng. 325) -----	3
Strength of Materials (Eng. 322) -----	3
Road and Street Improve- ments (Eng. 109) -----	4
Graphic Statics (Eng. 111) -----	5
*Machine Shop (Eng. 374) or Mineralogy (Eng. 433) -----	4
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3
*And Practical Mechanics (Eng. 321) -----	1

SENIOR CLASS.

First Term.

English (Ac. 108) -----	2
Physics (Ac. 505) -----	2
Geology (Eng. 441) -----	2
Theory of Structures (Eng. 113) -----	5

	H. Wk.
Railroad Engineering (Eng. 115) or Bacteriology (Vet. 118) -----	3
Bridge and Structural Design (Eng. 114) -----	9
Military Science (Ac. 603) -----	1
Technical Writing (Eng. 610) -----	3

Second Term.

Economics (Ac. 2) -----	2
Physics (Ac. 505) -----	2
Geology (Eng. 441) -----	2
Theoretical Hydraulics (Eng. 116) -----	5
Concrete and Masonry Construction (Eng. 118) -----	3
Military Science (Ac. 604) -----	1
Mechanical Engineering Lab. (Eng. 382) -----	4
Thesis (Eng. 120) -----	9

Third Term.

Economics (Ac. 2) -----	2
Astronomy (Ac. 506) -----	2
Geology (Eng. 441) -----	3
Sanitary Engineering (Eng. 119) -----	5
Masonry and Concrete Construction (Eng. 118) -----	3
Practical Hydraulics (Eng. 117) -----	3
Bridge and Structural Design (Eng. 114) -----	9
Military Science (Ac. 605) -----	1

ELECTRICAL ENGINEERING.**SOPHOMORE CLASS.***First Term.*

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 361) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Applied Mechanics (Eng. 312) -----	3
Mathematics (Ac. 403) -----	5
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 362) -----	4
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

Third Term.

	H. Wk.
English (Ac. 103c) -----	3
Mathematics (Ac. 404) -----	5
Applied Mechanics (Eng. 312) -----	3
Descriptive Geometry (Eng. 602) -----	4
Physics (Ac. 504) -----	3
Shop Work (Eng. 362) -----	5
Physical Laboratory (Ac. 502) -----	2
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.*First Term.*

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Electrical Eng. (Eng. 201) -----	3
Electrical Meas. (Eng. 205) -----	1
Kinematics (Eng. 604) -----	3
Machine Design (Eng. 606) -----	4
Practical Mechanics (Eng. 321) -----	1
Electrical Lab'y (Eng. 206) -----	4
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Electrical Eng. (Eng. 202) -----	3
Electrical Meas. (Eng. 205) -----	1
Strength of Materials (Eng. 322) -----	3
Machine Design (Eng. 606) -----	4
Practical Mechanics (Eng. 321) -----	1
Electrical Lab'y (Eng. 207) -----	4
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) -----	3
Mathematics (Ac. 405) -----	5
Electrical Eng. (Eng. 203) -----	3
Electrical Tests (Eng. 205) -----	1
Strength of Materials (Eng. 322) -----	3
Machine Design (Eng. 606) -----	4
Practical Mechanics (Eng. 321) -----	1
Electrical Lab'y (Eng. 208) -----	4
Shop Work (Eng. 371) -----	6
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3

SENIOR CLASS.*First Term.*

English (Ac. 108) -----	2
Physics (Ac. 505) -----	2
Electrical Eng. (Eng. 210) -----	3

	H. Wk.
Electrical Lab'y (Eng. 213) . . .	4
Electrical Design'g (Eng. 211) . .	2
Telephone Eng. (Eng. 215) . . .	2
Telephone Lab'y (Eng. 216) . . .	2
Power Plant Eng. (Eng. 331) . . .	5
Mech. Eng. Lab'y (Eng. 381) . . .	4
Machine Design (Eng. 607) . . .	1
Machine Design (Eng. 609) . . .	3
Military Science (Ac. 603) . . .	1

Second Term .

Economics (Ac. 2)	2
Electrical Designing (Eng. 211)	2
Electrical Eng. (Eng. 211)	3
Electrical Lab'y (Eng. 213)	4
Physics (Ac. 505)	2
Telephone Eng. (Eng. 215)	2
Telephone Lab'y (Eng. 216)	2
Street Railways (Eng. 214)	2
Thermodynamics (Eng. 332)	5
Mech. Eng. Lab. (Eng. 382)	4
Machine Design (Eng. 607)	1
Machine Design (Eng. 609)	3
Military Science (Ac. 604)	1

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Electrical Eng. (Eng. 212)	5
Electrical Eng. Lab. (Eng. 213)	4
Street Railways (Eng. 214)	2
Specifications and Contracts Eng. 219)	2
Thermodynamics (Eng. 332)	5
Mech. Eng. Lab. (Eng. 383)	4
Machine Design (Eng. 607)	1
Machine Design (Eng. 609)	3
Military Science (Ac. 605)	1

MECHANICAL ENGINEERING

SOPHOMORE CLASS.

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Applied Mechanics (Eng. 312)	3

	H. Wk.
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 362)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Kinematics (Eng. 604)	3
Graphic Statics (Eng. 605)	1
Machine Design (Eng. 606)	4
Electrical Eng. (Eng. 204)	3
Elec. Eng. Lab'y (Eng. 206)	4
Practical Mechanics (Eng. 321)	1
Shop Work (Eng. 371)	6
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Strength of Materials (Eng. 322)	3
Graphic Statics (Eng. 605)	1
Machine Design (Eng. 606)	4
Electrical Eng. (Eng. 204)	3
Elec. Eng. Lab'y (Eng. 207)	4
Practical Mechanics (Eng. 321)	1
Shop Work (Eng. 371)	6
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Strength of Materials (Eng. 322)	3
Graphic Statics (Eng. 605)	1
Machine Design (Eng. 606)	4
Electrical Eng. (Eng. 204a)	3
Elec. Eng. Lab'y (Eng. 208)	4
Practical Mechanics (Eng. 321)	1
Shop Work (Eng. 371)	4
Laboratory (Eng. 377)	2
Military Tactics (Ac. 602)	1
Military Drill (Ac. 600)	3

SENIOR CLASS.

First Term.

	H. Wk.
English (Ac. 108)	2
Physics (Ac. 505)	2
Electrical Eng. (a) (Eng. 217)	3
Heating and Ventilating (Eng. 334)	2
Power Plant Eng. (Eng. 331)	5
Machine Design (Eng. 607)	1
Machine Design (Eng. 608)	6
Elec. Eng. Lab'y (Eng. 218)	4
Mech. Eng. Lab'y (Eng. 381)	4
Technical Writing (Eng. 610)	3
Military Science (Ac. 603)	1

Second Term.

Economics (Ac. 2)	2
Physics (Ac. 505)	2
Hydraulics (Eng. 110)	5
Thermodynamics (Eng. 332)	5
Refrigeration (Eng. 336)	2
Machine Design (Eng. 607)	1
Machine Design (Eng. 608)	6
Mech. Eng. Lab'y (Eng. 382)	4
Thesis (Eng. 384)	2
Military Science (Ac. 604)	1

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Thermodynamics (Eng. 332)	5
Metallurgy (Agr. 104b)	3
Contracts and Specifications (Eng. 219)	2
Refrigeration (Eng. 336)	2
Machine Design (Eng. 607)	1
Machine Design (Eng. 608)	6
Mech. Eng. Lab'y (Eng. 383)	4
Thesis (Eng. 384)	4
Military Science (Ac. 605)	1

(a) Course 113 in civil engineering may be substituted.

MINING ENGINEERING.

Surveying (Eng. 105)

Forty-eight hours per week for four weeks immediately after commencement in summer camp.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
R. R. Surveying (Eng. 104)	5
Descriptive Geometry (Eng. 602)	4

H. Wk.

Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Mine Surveying (Eng. 401)	5
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mineralogy Laboratory (Eng. 431)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Applied Mechanics (Eng. 312)	3
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mining Engineering (Eng. 402)	5
Mineralogy Laboratory (Eng. 432)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5

H. Wk.

Applied Mechanics (Eng. 312)	3
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mining Engineering (Eng. 402)	5
Mineralogy Laboratory (Eng. 433)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3
Summer Course, Engineering 404. Taken immediately after commencement.	

SENIOR CLASS.

First Term.

English (Ac. 108)	2
Physics (Ac. 505)	2
Economic Geology (Eng. 442)	2
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104)	3
Drawing (Eng. 412)	3
Military Science (Ac. 603)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3

Second Term.

Economics (Ac. 2)	2
Physics (Ac. 505)	2
Hydraulics (Eng. 110)	5
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104)	3
Drawing (Eng. 412)	3
Military Science (Ac. 604)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Economic Geology (Eng. 443)	2
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204a)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104b)	3
Drawing (Eng. 412)	3
Military Science (Ac. 605)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3
*Electrical laboratory may be substituted.	

CHEMICAL ENGINEERING.

SOPHOMORE CLASS.

First Term.

H. Wk.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Applied Mech. (Eng. 312)	3
Mechanic Arts (Eng. 362)	4
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Desc. Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Applied Mechanics (Eng. 312)	3
Mechanic Arts (Eng. 362)	5
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 431)	4
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3

	H. Wk.
Geology (Eng. 435) -----	2
Military Science (Ac. 601) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Mineralogy Lab'y (Eng. 432) -----	4
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) or French or German -----	3
Mathematics (Ac. 405) -----	5
Organic Chemistry (Agr. 103a) -----	2
Industrial Chem. (Agr. 102a) -----	4
Geology (Eng. 435) -----	2
Military Science (Ac. 601) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Mineralogy Lab'y (Eng. 433) -----	4
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

First Term.

English (Ac. 108) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Economic Geology (Eng. 442) -----	2
Metallurgy (Agr. 104) -----	3
Theoretical Chem. (Agr. 107) -----	2
Electrical Eng. (Eng. 204) -----	2
Military Science (Ac. 603) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Chemical Lab'y (Org. Agr. 110f) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

Second Term.

Economics (Ac. 2) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Metallurgy (Agr. 104) -----	3
Electrical Eng. (Eng. 204) -----	2
Gas Engines (Eng. 324) -----	2
Engineering Chem. (Agr. 106) -----	2
Military Science (Ac. 604) -----	1
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Chemical Lab'y (Org. Agr. 110f) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

Third Term.

Economics (Ac. 2) -----	2
Physical Chem. (Agr. 108) -----	2
German or French -----	3
Economic Geology (Eng. 443) -----	2
Metallurgy (Agr. 104b) -----	3
Electrical Eng. (Eng. 204a) -----	2
Engineering Chem. (Agr. 106) -----	2
Military Science (Ac. 605) -----	1

	H. Wk.
Chemical Lab'y and Assaying (Agr. 110c) -----	9
Chemical Lab'y (Org. Agr. 110f) -----	4
Metallurgical Lab'y (Eng. 413) -----	3

CHEMISTRY AND METALLURGY.

SOPHOMORE CLASS.

Students in the sophomore class in this course may take either the course prescribed for sophomore students in chemical engineering or that prescribed for students pursuing the General Course

JUNIOR CLASS.

First Term.

English (Ac. 107) -----	3
Organic Chemistry (Agr. 103a) -----	3
Industrial Chem. (Agr. 102a) -----	3
Geology (Eng. 435) -----	2
Advanced Inorganic Chemistry (Agr. 111) -----	2
Military Science (Ac. 601) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Mineralogy Lab'y (Eng. 431) -----	4
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
Organic Chem. (Agr. 103a) -----	3
Industrial Chem. (Agr. 102a) -----	3
Geology (Eng. 435) -----	2
Advanced Inorganic Chemistry (Agr. 111) -----	2
Military Science (Ac. 601) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Mineralogy Lab'y (Eng. 432) -----	4
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) -----	3
Organic Chem. (Agr. 103a) -----	2
Industrial Chem. (Agr. 102a) -----	4
Geology (Eng. 435) -----	2
Advanced Inorganic Chemistry (Agr. 111) -----	2
Military Science (Ac. 602) -----	1
Chemical Lab'y (Quant. Agr. 110b) -----	9
Mineralogy Lab'y (Eng. 433) -----	4
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

First Term.

English (Ac. 108) -----	2
Physical Chem. (Agr. 108) -----	2

H. Wk.

German or French	3
Economic Geology (Eng. 442)	2
Metallurgy (Agr. 104)	3
Theoretical Chem. (Agr. 107)	2
Bacteriology (Vet. 118)	6
Military Science (Ac. 603)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Metallurgical Lab'y (Eng. 413)	3

Second Term.

Economics (Ac. 2)	2
Physical Chemistry (Agr. 108)	2
German or French	3
Metallurgy (Agr. 104)	3
Engineering Chem. (Agr. 106)	2
Bacteriology (Vet. 118)	6
Military Science (Ac. 604)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Metallurgical Lab'y (Eng. 413)	3

Third Term.

Economics (Ac. 2)	2
Physical Chemistry (Agr. 108)	2
German or French	3
Economic Geology (Eng. 443)	2
Metallurgy (Agr. 104b)	3
Engineering Chem. (Agr. 106)	2
Military Science (Ac. 605)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Chemical Lab'y (Org. Agr. 110f)	6
Metallurgical Lab'y (Eng. 412)	3

TWO-YEAR COURSE IN

MECHANIC ARTS.

FIRST YEAR.

First Term.

English (special course)	5
History (special course)	2
Mathematics (special course)	10
Drawing (Eng. 601)	5
Shop Work (Eng. 351)	6
Military Drill (Ac. 600)	3

Second Term.

English (special course)	5
History (special course)	2
Mathematics (special course)	10
Drawing (Eng. 601)	5
Shop Work (Eng. 352)	6
Military Drill (Ac. 600)	3
English (special course)	5

Third Term.

History (special course)	2
Mathematics (special course)	10

H. Wk.

Drawing (Eng. 601)	5
Shop Work (Eng. 353)	6
Military Drill (Ac. 600)	3

SECOND YEAR.

First Term.

English (special course)	3
Mathematics (special course)	5
Chemistry (Agr. 101)	4
Engines and Boilers (Eng. 323)	3
Shop Work (Eng. 361, 371)	12
Military Drill (Ac. 600)	3

Second Term.

Mechanics (Eng. 312)	3
English (special course)	3
Mathematics (special course)	5
Chemistry (Agr. 101)	4
Shop Work (Eng. 362, 371)	12
Military Drill (Ac. 600)	3

Third Term.

Mechanics (Eng. 312)	3
English (special course)	3
Mathematics (special course)	5
Chemistry (Agr. 101)	4
Shop Work (Eng. 362, 371)	13
Military Drill (Ac. 600)	3

TWO-YEAR COURSE IN

APPLIED ELECTRICITY.

FIRST YEAR.

First Term.

English (special course)	5
Mathematics (special course)	5
Electrical Eng. (Eng. 204)	3
Engines and Boilers (Eng. 323)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 206)	4
Shop Work (Eng. 361)	4
Power Plant (Eng. 220)	4

Second Term.

English (special course)	5
Mathematics (special course)	5
Electrical Eng. (Eng. 204)	3
Gas Engines (Eng. 324)	3
Drawing (Eng. 601)	5
Shop Work (Eng. 362)	4
Power Plant (Eng. 220)	4

Third Term.

English (special course)	5
Mathematics (special course)	5
Electrical Eng. (Eng. 205)	3
Trans. Power (Eng. 325)	3
Drawing (Eng. 601)	5

	H. Wk.
Electrical Lab'y (Eng. 208) ---	4
Shop Work (Eng. 362) -----	4
Power Plant (Eng. 220) -----	4

SECOND YEAR.

First Term.

English (special course) -----	3
Mathematics (Ac. 401) -----	5
Electrical Eng. (Eng. 217) -----	4
Kinematics (Eng. 604) -----	3
Practical Mech. (Eng. 321) -----	1
Drawing (Eng. 606) -----	4
Electrical Lab'y (Eng. 218) -----	4
Shop Work (Eng. 362) -----	4
Power House (Eng. 220) -----	4

Second Term.

English (special course) -----	3
Electrical Eng. (Eng. 217a) -----	4
Applied Mechanics (Eng. 312) -----	3
Practical Mechanics (Eng. 321) -----	1
Drawing (Eng. 606) -----	4
Electrical Lab'y (Eng. 218a) -----	4
Mech. Lab'y (Eng. 378) -----	3
Shop Work (Eng. 374) -----	4
Power House (Eng. 220) -----	4

Third Term

English (special course) -----	3
Street Railways (Eng. 214) -----	2
Electrical Eng. (Eng. 217b) -----	4
Applied Mechanics (Eng. 312) -----	3
Practical Mechanics (Eng. 321) -----	1
Drawing (Eng. 606) -----	4
Electrical Lab'y (Eng. 218b) -----	4
Shop Work (Eng. 374) -----	4
Power House (Eng. 220) -----	4

SPECIAL COURSE FOR ROAD
FOREMEN AND INSPECTORS.*First Term.*

Mathematics (special course) -----	5
Drawing (Eng. 601) -----	5
Surveying (Eng. 102) -----	5
Roads and Pavements (Eng. 107) -----	5
Mechanic Arts (Eng. 351 or 361) -----	6

Second Term.

Mathematics (special course) -----	5
Drawing (Eng. 601) -----	5
Surveying (Eng. 102) -----	5
Roads and Pavements (special course) -----	3
Road Materials Lab'y (Eng. 108) -----	3
Mechanic Arts (Eng. 352 or 362) -----	6

H. Wk.

Third Term.

Mathematics (special course) -----	5
Drawing (Eng. 601) -----	5
Surveying (Eng. 102) -----	5
Roads and Pavements (special course) -----	3
Road and Street Improvements (Eng. 109) -----	3

SPECIAL ONE-YEAR COURSE
IN WIRELESS TELEGRAPHY.*First Term.*

English (special course) -----	5
Mathematics (special course) -----	5
Electrical Eng. (Eng. 204) -----	3
Engines and Boilers (Eng. 323) -----	3
Drawing (Eng. 601) -----	5
Electrical Lab'y (Eng. 206) -----	4
Shop Work (Eng. 361) -----	4
Wireless Telegraphy (Eng. 221) -----	4

Second Term.

English (special course) -----	5
Mathematics (special course) -----	5
Electrical Eng. (Eng. 204) -----	3
Gas Engines (Eng. 324) -----	3
Drawing (Eng. 601) -----	5
Electrical Lab'y (Eng. 207) -----	4
Shop Work (Eng. 362) -----	4
Wireless Telegraphy (Eng. 221) -----	4

Third Term.

English (special course) -----	5
Mathematics (special course) -----	5
Electrical Eng. (Eng. 205) -----	3
Trans. Power (Eng. 325) -----	3
Drawing (Eng. 601) -----	5
Electrical Lab'y (Eng. 208) -----	4
Shop Work (Eng. 362) -----	4
Wireless Telegraphy (Eng. 221) -----	4

TWO-YEAR MINING COURSE.

FIRST YEAR.

First Term.

English (special course) -----	5
Mathematics (Ac. 401) -----	5
Mining (Eng. 401) -----	5
Mineralogy (Eng. 431) -----	4
Drawing (Eng. 601) -----	5
Military Drill (Ac. 600) -----	3

Second Term.

English (special course) -----	5
Mathematics (Ac. 402) -----	5

	H. Wk.
Mining (Eng. 402) -----	5
Surveying (Eng. 102) -----	5
Mineralogy (Eng. 432) -----	4
Drawing (Eng. 601) -----	5
Military Drill (Ac. 600) -----	3

Third Term.

English (special course) -----	5
Mathematics (Ac. 402) -----	5
Mining (Eng. 402) -----	5
Surveying (Eng. 103) -----	5
Mineralogy (Eng. 433) -----	4
Drawing (Eng. 601) -----	5
Military Drill (Ac. 600) -----	3

SECOND YEAR.

First Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 204) -----	3
Surveying (Eng. 104) -----	5
Eng. Geology (Eng. 436) -----	2
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 361) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

Second Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 204) -----	3
Applied Mech. (Eng. 312) -----	3
Eng. Geology (Eng. 436) -----	2
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 362) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

Third Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 217b) -----	4
Applied Mech. (Eng. 312) -----	3
Eng. Geology (Eng. 436) -----	2
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 362) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

ARCHITECTURE.

FRESHMAN CLASS.

First Term.

English (Ac. 102a) -----	3
History (Ac. 201) -----	2
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4

	H. Wk.
Freehand Drawing (Arch. 11) 4	
Descriptive Geometry (Eng. 602) -----	4
Shades and Shadows (Arch. 15) -----	2
Elements of Architecture (Arch. 19) -----	7
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Freehand Drawing (Arch. 11) 4	
Descriptive Geometry (Eng. 602) -----	4
Perspective (Arch. 17) -----	2
Elements of Architecture (Arch. 19) -----	7
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Freehand Drawing (Arch. 11) 4	
Surveying (Eng. 102c) -----	2
Descriptive Geometry (Eng. 602) -----	4
Elements of Architecture (Arch. 19) -----	7
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Physics (Ac. 504) -----	3
Physical Laboratory (Ac. 502) 2	
History of Architecture (Arch. 21) -----	3
Charcoal Drawing (Arch. 23) -----	6
Architectural Design (Arch. 29) -----	10
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103b) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Physics (Ac. 504) -----	3
Physical Laboratory (Ac. 504) 2	
History of Architecture (Arch. 21) -----	3
Applied Mechanics (Eng. 312) 3	
Architectural Design (Arch. 29) -----	10

H. Wk.
Military Drill (Ac. 600) -----3

Third Term.

English (Ac. 103c) -----3
Mathematics (Ac. 404) -----5
Physics (Ac. 504) -----3
Physical Laboratory (Ac. 504) 2
History of Architecture
(Arch. 21) -----3
Applied Mechanics (Eng. 312) 3
Charcoal Drawing (Arch. 23) --6
Architectural Design (Arch.
29) -----10
Military Drill (Ac. 600) -----3

JUNIOR CLASS.

First Term.

History of Architecture
(Arch. 31) -----3
Mathematics (Ac. 405) -----5
French (Ac. 301a) -----4
Building Construction (Arch.
33) -----4
Pen and Ink Rendering (Arch
35) -----4
Water Color Painting (Arch.
37) -----6
Architectural Design (Arch.
39) -----12
Military Science (Ac. 601) ---1
Military Drill (Ac. 600) -----3

Second Term.

History of Architecture
(Arch. 31) -----3
Mathematics (Ac. 405) -----5
French (Ac. 301b) -----3
Building Construction (Arch
33) -----4
Strength of Materials (Eng.
322) -----3
Water Color Painting (Arch
37) -----6
Architectural Design (Arch.
39) -----12
Military Science (Ac. 601) ---1
Military Drill (Ac. 600) -----3

Third Term.

History of Architecture
(Arch. 31) -----3
Mathematics (Ac. 405) -----5
French (Ac. 301c) -----4
Building Construction (Arch.
33) -----4
Strength of Materials (Eng.
322) -----3
Graphic Statics (Eng. 111) ---5

H. Wk.
Architectural Design (Arch.
39) -----12
Military Science (Ac. 602) ---1
Military Drill (Ac. 600) -----3

SENIOR CLASS.

First Term.

Historic Ornament (Arch. 41) 3
French (Ac. 302a) -----4
Building Construction (Arch.
45) -----4
Heating and Ventilation (Eng.
334) -----2
Steel Frame Construction
(Eng. 113a) -----2
Advanced Freehand Drawing
(Arch. 47) -----6
Architectural Design (Arch.
49) -----18
Military Science (Ac. 603-605) 1

Second Term.

History of Painting (Arch.
42) -----3
French (Ac. 302b) -----3
Economics (Ac. 2) -----2
Building Construction (Arch.
45) -----4
Reinforced Concrete (Eng.
118) -----3
Advanced Freehand Drawing
(Arch. 47) -----6
Architectural Design (Arch.
49) -----18
Military Science (Ac. 603-605) 1

Third Term.

History of Sculpture (Arch.
43) -----3
French (Ac. 302c) -----4
Economics (Ac. 2) -----2
Building Construction (Arch.
45) -----4
Wiring and Illumination
(Eng.) -----2
Clay Modeling (Arch. 48) ---6
Architectural Design (Arch.
49) -----18
Military Science (Ac. 603-605) 1

ARCHITECTURAL ENGINEERING.

JUNIOR CLASS.

First Term.

History of Architecture (Arch.
31) -----3
Mathematics (Ac. 405) -----5
Building Construction (Arch.
33) -----4

H. Wk.

Geology (Eng. 441)	2
Electricity and Magnetism (Eng. 204)	2
Roads and Pavements (Eng. 107)	5
Structural Drafting (Eng. 112) ..	6
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

History of Architecture (Arch. 31)	3
Mathematics (Ac. 405)	5
Building Construction (Arch. 33)	4
Geology (Eng. 441)	2
Electricity and Magnetism (Eng. 204)	2
Strength of Materials (Eng. 322)	3
Structural Drafting (Eng. 112) ..	6
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

History of Architecture (Arch. 31)	3
Mathematics (Ac. 405)	5
Building Construction (Arch. 33)	4
Geology (Eng. 441)	2
Dynamo Electric Machinery (Eng. 204a)	2
Strength of Materials (Eng. 322)	3
Graphic Statics (Eng. 111)	5
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

SENIOR CLASS.

First Term.

Building Construction (Arch. 45)	4
Heating and Ventilation (Eng. 334)	2
Theory of Structures (Eng. 113)	5
Structural Design (Eng. 114) ..	9
Steam Engines (Eng. 323)	3
Power Plant (Eng. 220)	4
Architectural Design (Arch. 39)	12
Military Science (Ac. 603-605) ..	1

Second Term.

Building Construction (Arch. 45)	4
Economics (Ac. 2)	2
Surveying (Eng. 102)	5

H. Wk.

Reinforced Concrete (Eng. 118)	3
Testing Laboratory (Eng. 382) ..	4
Gas Engines (Eng. 324)	3
Architectural Design (Arch. 39)	12
Military Science (Ac. 603-605) ..	1

Third Term.

Building Construction (Arch. 45)	4
Economics (Ac. 2)	2
Surveying (Eng. 102)	5
Foundations (Eng. 118)	3
Structural Design (Eng. 114) ..	9
Wiring and Illumination (Eng.)	2
Architectural Design (Arch. 39)	12
Military Science (Ac. 603-605) ..	1

TWO-YEAR SPECIAL COURSE
IN ARCHITECTURE.

FIRST YEAR.

First Term.

History of Architecture (Arch. 21)	3
Charcoal Drawing (Arch. 23) ..	6
Descriptive Geometry (Eng. 602)	4
Shades and Shadows (Arch. 13)	2
Architectural Design (Arch. 29)	10
Military Drill (Ac. 600)	3

Second Term.

History of Architecture (Arch. 21)	3
Charcoal Drawing (Arch. 23) ..	6
Descriptive Geometry (Eng. 602)	4
Perspective (Arch. 15)	2
Architectural Design (Arch. 29)	10
Military Drill (Ac. 600)	3

Third Term.

History of Architecture (Arch. 21)	3
Charcoal Drawing (Arch. 23) ..	6
Pen and Ink Rendering (Arch. 35)	4
Descriptive Geometry (Eng. 602)	4
Architectural Design (Arch. 29)	10
Military Drill (Ac. 600)	3

SECOND YEAR.

First Term.

	H. Wk.
History of Architecture (Arch. 31) -----	3
Water Color Painting (Arch. 37) -----	6
Advanced Freehand Drawing (Arch. 47) -----	6
Historic Ornament (Arch. 41) -----	3
Architectural Design (Arch. 49) -----	18
Military Drill (Ac. 600) -----	3
<i>Second Term.</i>	
History of Architecture (Arch. 31) -----	3
Water Color Painting (Arch. 37) -----	6

H. Wk.

Advanced Freehand Drawing (Arch. 47) -----	6
History of Painting (Arch. 42) -----	3
Architectural Design (Arch. 49) -----	18
Military Drill (Ac. 600) -----	3

Third Term.

History of Architecture (Arch. 31) -----	3
Water Color Painting (Arch. 37) -----	6
Clay Modeling (Arch. 48) -----	6
History of Sculpture (Arch. 43) -----	3
Architectural Design (Arch. 49) -----	18
Military Drill (Ac. 600) -----	3

COLLEGE OF AGRICULTURAL SCIENCES.

AGRICULTURE.

FRESHMAN CLASS.

First Term.

	H. Wk.
English (Ac. 102a, c) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2

H. Wk.

Corn (Agr. 202) -----	4
Zoology (Agr. 701) -----	6
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Organic Chemistry (Agr. 103b) -----	3
Stock Judging (Agr. 802) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Zoology (Agr. 701) -----	5
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Stock Judging (Agr. 803) -----	4
Farm Accounts (Agr. 203) -----	2
Organic Chemistry (Agr. 103b) -----	3
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 103c) -----	3
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Horticulture (Agr. 601) -----	6
Agriculture (Agr. 203) -----	4
Agricultural Chem. (Agr. 105) -----	4
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

First Term.

English (a) (Ac. 107) -----	3
Dairying (Agr. 804) -----	4

	H. Wk.
Agr. Bacteriology (Agr. 303) ---	6
*Veterinary Science (a) (Vet. 102) -----	5
Drainage (Agr. 520) -----	4
Horticulture (Agr. 602) -----	2
Chemical Lab'y (a) (Agr. 110b) ---	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (a) (Ac. 107) -----	3
Botany (Agr. 304) -----	6
*Veterinary Science (a) (Vet. 102) -----	5
An. Husbandry (Agr. 805) -----	4
Horticulture (Agr. 603, 604) ---	6
Geology (Eng. 434) -----	4
Chemical Lab'y (a) (Agr. 110b) ---	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

English (a) (Ac. 107) -----	3
Botany (Agr. 304) -----	6
*Veterinary Science (a) (Vet. 102) -----	5
Animal Husbandry (Agr. 806) ---	4
Agriculture (Agr. 205) -----	4
Horticulture (Agr. 603) -----	4
Chemical Lab'y (a) (Agr. 110b) ---	6
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3

(a) Education or a modern language may be substituted.

*Veterinary Science is required of students who specialize in animal husbandry.

SENIOR CLASS

The studies of the course in Agriculture are divided into five groups, as follows:

Group "A," agronomy: Gives special prominence to crops, soils, and farm machinery.

Group "B," horticulture: Gives special reference to fruit growing, trucking, greenhouse management, and landscape gardening.

Group "C," animal husbandry: Gives special prominence to all work pertaining to live stock.

Group "D," agricultural chemistry: Especially designed to prepare students for experiment station and fertilizer control work.

Group "E," botany: Designed

to train students for station work or to pursue advanced work in botany.

The elective work in each group must be approved at the beginning of the senior year by the president and the professor in charge, and with the required work must aggregate at least twenty-one hours, counting two hours laboratory equal to one hour. At least nineteen hours of this work must be taken in each term; and the maximum for any term is a total of twenty-five such hours in all classes, except by special permission of the faculty.

The giving of an elective course will be optional with the professor in charge unless it be elected by at least four students.

GROUP "A" AGRONOMY.

First Term.

	H. Wk.
Agr. and Agr. Lab. (Agr. 206) ---	4
Entomology (Agr. 702) -----	5
Military Science (Ac. 603) -----	1
Soils and Soils Lab'y (Agr. 211) ---	5
German (a) (Ac. 305a) -----	4
Thesis (Agr. 209) -----	

Second Term.

Agriculture (Agr. 207) -----	2
Farm Machinery (Agr. 522) -----	2
Forestry (Agr. 608) -----	5
Military Science (Ac. 604) -----	1
Soils and Soils Lab'y (Agr. 211) ---	5
German (a) (Ac. 305b) -----	3
Thesis (Agr. 209) -----	

Third Term.

Agr. and Agr. Lab. (Agr. 208) ---	4
Entomology (Agr. 703) -----	5
Military Science (Ac. 605) -----	1
Soils and Soils Lab'y (Agr. 211) ---	5
German (a) (Ac. 305c) -----	4
Thesis (Agr. 209) -----	

(a) French may be substituted.

Electives: The additional work is to be selected from the following subjects:

ELECTIVES FOR SENIOR GROUPS.

First Term.

Cotton (Agr. 206) -----	4
Animal Husbandry (Agr. 807, 808) -----	6

	H. Wk.
Horticulture (Agr. 605) -----	5
Canning (Agr. 606) -----	3
Botany (Agr. 305) -----	6
Vet. Science (Vet. 102) -----	5
Industrial Chem. (Agr. 102a) --	3
French (Ac. 302a) -----	4
Physics (Ac. 505) -----	2
Chemical Lab'y (Agr. 110b) --	6
Mathematics (Ac. 403 & 404, or 405) -----	5
Education -----	3

Second Term.

Agriculture (Agr. 207) -----	4
Animal Husbandry (Agr. 808, 809, 811, 813) -----	6
Horticulture (Agr. 605, 606) --	5
Botany (Agr. 305) -----	6
Botany (Agr. 306) -----	6
Vet. Science (Vet. 102) -----	5
Industrial Chem. (Agr. 102a) --	3
French (Ac. 302b) -----	3
Chemical Lab'y (Agr. 110b) --	6
Mathematics (Ac. 403 & 404, or 405) -----	5
Forestry (Agr. 608) -----	5
Education -----	3
Farm Engines (Agr. 521) -----	2

Third Term.

Agriculture (Agr. 208) -----	4
Animal Husbandry (Agr. 810, 818) -----	4
Horticulture (Agr. 605, 609) --	7
Botany (Agr. 307) -----	6
Vet. Science (Vet. 102) -----	5
Industrial Chem. (Agr. 102a) --	3
French (Ac. 302c) -----	4
Chemical Lab'y (Agr. 110) -----	6
Mathematics (Ac. 403 & 404 or 405) -----	5
Education -----	3

GROUP "B," HORTICULTURE.

First Term.

Horticulture (Agr. 605, 606) --	8
Entomology (Agr. 702) -----	5
Military Science (Ac. 603) -----	1
Botany (Agr. 305) -----	6
Soils (Agr. 211) -----	5
German (a) (Ac. 306a) -----	4
Thesis (Agr. 611) -----	

Second Term.

Horticulture (Agr. 605, 607) --	8
Forestry (Agr. 608) -----	4
Military Science (Ac. 604) -----	1

	H. Wk.
Botany (Agr. 305) -----	6
Soils (Agr. 211) -----	5
German (a) (Ac. 306b) -----	3
Thesis (Agr. 610) -----	

Third Term.

Horticulture (Agr. 605, 609) --	7
Entomology (Agr. 703) -----	5
Military Science (Ac. 605) -----	1
Soils (Agr. 211) -----	5
German (a) (Ac. 306c) -----	4
Thesis (Agr. 610) -----	
(a) French or English and Political Economy and one additional subject may be substituted.	
<i>Electives:</i> The additional work is to be selected from the elective subjects listed above.	

GROUP "C," ANIMAL

HUSBANDRY.

Animal Hus. (Agr. 807, 808, 812) -----	7
Animal Hus. Lab'y (Agr. 812) --	2
Entomology (Agr. 702) -----	5
Military Science (Ac. 603) -----	1
Soils and Soils Lab'y (Agr. 211) --	5
German (a) (Ac. 306a) -----	4
Thesis -----	

Second Term.

Animal Hus. (Agr. 808, 812, 813) -----	6
Animal Hus. Lab'y (Agr. 809, 811, 812) -----	6
Military Science (Ac. 604) -----	1
Soils and Soils Lab'y (Agr. 211) --	5
German (a) (Ac. 306b) -----	3
Thesis -----	

Third Term.

Animal Hus. (Agr. 808, 810, 812) -----	6
Animal Hus. Lab'y (Agr. 812) --	2
Entomology (Agr. 703) -----	5
Military Science (Ac. 605) -----	1
Soils and Soils Lab'y (Agr. 211) --	5
German (a) (Ac. 306c) -----	4
Thesis -----	

(a) French may be substituted.

Electives: The additional work is to be selected from the elective subjects listed on page 51 or the third year course in Veterinary Medicine.

GROUP "D," AGRICULTURAL
CHEMISTRY.

First Term.

	H. Wk.
Chemical Lab'y (Agr. 110) -----	6
Entomology (Agr. 702) -----	5
Military Science (Ac. 603) -----	1
German (a) (Ac. 306a) -----	4
Thesis -----	

Second Term.

Chemical Lab'y (Agr. 110) -----	6
Forestry (Agr. 608) -----	5
Military Science (Ac. 604) -----	1
German (a) (Ac. 306b) -----	3
Thesis -----	

Third Term.

Chemical Lab'y (Agr. 110) -----	6
Entomology (Agr. 703) -----	5
Military Science (Ac. 605) -----	1
German (a) (Ac. 306c) -----	4
Thesis -----	

(a) French may be substituted.

Electives: The additional work is to be selected from the elective subjects listed on page 51.

GROUP "E," BOTANY.

First Term.

German (a) (Ac. 306a) -----	4
Botany (Agr. 305) -----	6
Soils and Soils Lab'y (Agr. 211) -----	5
Entomology (Agr. 702) -----	5
Military Science (Ac. 603) -----	1
Thesis -----	

Second Term.

German (a) (Ac. 306b) -----	3
Botany (Agr. 305 or 306) -----	6
Soils and Soils Lab'y (Agr. 211) -----	5
Forestry and Forestry Lab'y (Agr. 609) -----	5
Military Science (Ac. 604) -----	1
Thesis -----	

Third Term.

German (a) (Ac. 306c) -----	4
Botany (Agr. 307) -----	6
Soils and Soils Lab'y (Agr. 211) -----	5
Entomology (Agr. 703) -----	5
Military Science (Ac. 605) -----	1
Thesis -----	

(a) French may be substituted.

Electives: The equivalent of at least six hours from the subjects listed on page 51, subject to the direction of the professor.

TWO-YEAR COURSE IN AGRICULTURE.

Continuation in any subject is conditioned upon satisfactory progress in that subject.

FIRST YEAR.

First Term.

	H. Wk.
Corn (Agr. 204) -----	4
Dairying (Agr. 815) -----	6
Veterinary Science (Vet. 102) -----	5
Horticulture (Agr. 601) -----	4
Chemistry (Agr. 101) -----	4
English (special course) -----	3
Physiology (Vet. 101) -----	2
Feeding (Agr. 816) -----	2
Shop Work -----	6
Military Drill (a) (Ac. 600) -----	3

Second Term.

Veterinary Science (Vet. 102) -----	5
Chemistry (Agr. 101) -----	4
English (special course) -----	3
Physiology (Vet. 101) -----	2
Livestock Management (Agr. 817) -----	3
Veg. Gardening (Agr. 603) -----	4
Feeding (Agr. 816) -----	2
Judging Livestock (Agr. 818) -----	4
Shop Work -----	6
Military Drill (a) (Ac. 600) -----	3

Third Term.

Veterinary Science (Vet. 102) -----	5
Chemistry (Agr. 101) -----	4
English (special course) -----	3
Physiology (Vet. 101) -----	2
Livestock Management (Agr. 817) -----	3
Judging Livestock (Agr. 819) -----	2
Livestock Feeding (Agr. 816) -----	2
Agriculture (Agr. 204) -----	4
Veg. Gardening (Agr. 603) -----	4
Shop Work -----	6
Military Drill (Ac. 600) -----	3

SECOND YEAR.

First Term.

Poultry (Agr. 822) -----	2
Zoology (Agr. 701) -----	6
Insects (Agr. 702) -----	5
Soils and Fertilizers (Agr. 213) -----	2
Horticulture (Agr. 605) -----	5
Livestock Judging (Agr. 820) -----	4
Canning (Agr. 606) -----	3
Agriculture (Agr. 206) -----	4

	H. Wk.
<i>Second Term.</i>	
Agriculture (Agr. 212) -----	4
Zoology (Agr. 701) -----	5
Swine Judging (Agr. 822) -----	4
Soils and Fertilizers (Agr. 213) -----	2
Meats (Agr. 823) -----	4
Terracing and Drainage (Agr. 214) -----	2
Horticulture (Agr. 605) -----	3
Forestry (Agr. 608) -----	5

<i>Third Term.</i>	
Agriculture (Agr. 208) -----	8
Insects (Agr. 703) -----	5
Horticulture (Agr. 605) -----	5
Principles of Breeding (Agr. 824) -----	2
Sheep Judging (Agr. 825) -----	2
Veterinary Science or substitute -----	8

TWO-YEAR COURSE IN PHARMACY.

FIRST YEAR.

First Term.

English (a) (special course) --	3
Chemistry (Agr. 101) -----	4
Physiology (Vet. 101) -----	2
Pharmacy (Agr. 401a) -----	3
Botany (Agr. 302) -----	6
Pharmaceutical Lab'y (Agr. 401b) -----	8
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3

Second Term.

English (a) (special course) --	3
Chemistry (Agr. 101) -----	4
Physiology (Vet. 101) -----	2
†Pharmacy (Agr. 401a) -----	3
Pharmacognosy (Agr. 402) -----	4
Botany (Agr. 302) -----	6
Chemical Lab'y (Agr. 110a) --	6
Pharmaceutical Laboratory (Agr. 401b) -----	8
Military Drill (Ac. 600) -----	3

Third Term.

English (a) (special course) --	3
Botany (Agr. 307) -----	6
Chemistry (Agr. 101) -----	4
Phar. Chem. (Agr. 406) -----	3
Physiology (Vet. 101) -----	2
Pharmacognosy (Agr. 402) -----	4
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3
(a) Latin may be substituted.	
†Substitute Phar. Chem. (Agr. 406) latter half term.	

	H. Wk.
<i>SECOND YEAR.</i>	
<i>First Term.</i>	
Pharmacy (Agr. 403a) -----	3
Adv. Pharmacog. (Agr. 404) --	4
Pharmaceutical Laboratory (Agr. 403b) -----	12
Organic Chem. (Agr. 103a) -----	2
Chemical Lab'y (Agr. 110c) --	6
Bacteriology (Vet. 108) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Pharmacy (Agr. 403a) -----	3
*Adv. Pharmacog. (Agr. 404) --	4
Alkaloidal Assay (Agr. 403c) --	9
Organic Chem. (Agr. 103a) -----	2
Chemical Lab'y (Agr. 110c) --	6
Bacteriology (Vet. 108) -----	6
United States Phar. (Agr. 407) --	3
†Pharmacology (Vet. 120) -----	3
Military Drill (Ac. 600) -----	3

Third Term.

Pharmacy (Agr. 403a) -----	3
Prescriptions (Agr. 405) -----	3
United States Phar. (Agr. 407) --	3
Pharmacology (Vet. 120) -----	3
Prescription Laboratory (Agr. 403d) -----	4
Pharmaceutical Testing and Drug Analysis (403e) -----	6
Organic Chem. (Agr. 103a) -----	2
Toxicology (Agr. 110e) -----	7
Military Drill (Ac. 600) -----	3
†Substitute for Bacteriology in latter half second term.	
*Substitute Prescriptions (Agr. 405) latter half second term.	

THREE-YEAR COURSE IN PHARMACY.

FIRST YEAR.

First Term.

English (Ac. 102a) -----	3
Latin (Ac. 209) -----	3
Chemistry (Agr. 101) -----	4
Pharmacy Lab'y (Agr. 401b) --	8
Pharmacy (Agr. 401a) -----	3
Physiology (Vet. 101) -----	2
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
Latin (Ac. 209) -----	4
Chemistry (Agr. 101) -----	4
†Pharmacy (Agr. 401a) -----	3

	H. Wk.
Physiology (Vet. 101) -----	2
Pharmacy Lab'y (Agr. 401b) -----	8
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102b) -----	3
Latin (Ac. 209) -----	4
Chemistry (Agr. 101) -----	4
Physiology (Vet. 101) -----	2
Pharmaceutical Chem. (Agr. 406) -----	3
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3
†Substitute Pharmaceutical Chemistry (Agr. 406) latter half term.	

SECOND YEAR.

First Term.

Pharmacy (Agr. 403a) -----	3
Physics (Ac. 504) -----	3
Botany (Agr. 302) -----	6
Pharmacy Lab'y (Agr. 403b) -----	12
Chemical Lab'y (Agr. 110b) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Pharmacy (Agr. 403a) -----	3
Physics (Ac. 504) -----	3
Pharmacognosy (Agr. 402) -----	4
Botany (Agr. 302) -----	6
Alkaloidal Assay (Agr. 403c) -----	9
Chemical Lab'y (Agr. 110b) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

Pharmacy (Agr. 403a) -----	3
Physics (Ac. 504) -----	3
Pharmacognosy (Agr. 402) -----	4
Botany (Agr. 307) -----	6
Prescription Lab'y (Agr. 403d) -----	4
Pharmaceutical Testing and Drug Analysis -----	6
Toxicology (Agr. 110c) -----	7
Military Drill (Ac. 600) -----	3

THIRD YEAR.

First Term.

Advanced Pharmacognosy (Agr. 404) -----	4
Organic Chemistry (Agr. 103a) -----	2
German (Ac. 305a) -----	4
Bacteriology (Vet. 108) -----	6
Zoology (Agr. 701) -----	5

	H. Wk.
Chemical Lab'y (Agr. 110c) -----	6
Food and Drug Analysis (Agr. 408j) -----	12
Military Tactics (Ac. 601) -----	1

Second Term.

††Advanced Pharmacognosy (Agr. 404) -----	4
Organic Chemistry (Agr. 103a) -----	2
United States Pharmacopoeia (Agr. 407) -----	3
†Bacteriology (Vet. 108) -----	6
German (Ac. 305b) -----	4
Zoology (Agr. 701) -----	5
Chemical Lab'y (Agr. 110c) -----	6
Organic Chemical Lab'y (Agr. 408g) -----	8
Military Tactics (Ac. 601) -----	1

Third Term.

Prescriptions (Agr. 405) -----	3
German (Ac. 305c) -----	4
Organic Chemistry (Agr. 103a) -----	2
United States Pharmacopoeia (Agr. 407) -----	3
Pharmacology (Vet. 120) -----	3
Chemical Lab'y (Agr. 110c) -----	6
Organic Chemical Lab'y (Agr. 408g) -----	12
Military Tactics (Ac. 602) -----	1
†† Substitute Prescriptions (Agr. 405) latter half second term.	
†Substitute Pharmacology (Vet. 120) latter half second term.	

PHARMACY.

FRESHMAN CLASS.

First Term.

English (102a) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) -----	3
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) -----	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

	H. Wk.
<i>Third Term.</i>	
English (102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 205) -----	3
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
†Mathematics (Ac. 403) -----	5
Botany (Agr. 302) -----	6
English (Ac. 103a) -----	3
Physiology (Vet. 101) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
English (Ac. 103c) -----	3
†Mathematics (Ac. 403) -----	5
Botany (Agr. 302) -----	6
Physiology (Vet. 101) -----	2
Chemical Lab'y (Ac. 110a) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

Physics (Ac. 504) -----	3
English (Ac. 103c) -----	3
†Mathematics (Ac. 404) -----	5
Botany (Agr. 307) -----	6
Physiology (Vet. 101) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3
†With approval of faculty other work may be substituted.	

JUNIOR CLASS.

First Term.

English (Ac. 107) -----	3
Pharmacy (Agr. 401a) -----	3
Pharmaceutical Lab'y (Agr. 401b) -----	8
Chemical Lab'y (Agr 110b) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 107) -----	3
†Pharmacy (Agr. 401a) -----	3

	H. Wk.
<i>Pharmaceutical Laboratory</i>	
Agr. 401b) -----	8
Pharmacognosy (Agr. 402) -----	4
Chemical Lab'y (Agr. 110b) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 107) -----	3
Phar. Chem. (Agr. 406) -----	3
Pharmacognosy (Agr. 402) -----	4
Chemical Lab'y (Agr. 110b) -----	6
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3
†Substitute Phar. Chem. (Agr. 406) latter half term.	

SENIOR CLASS.

First Term.

<i>Bacteriology and Bact. Lab'y</i>	
(Vet. 108) -----	6
Organic Chem. (Agr. 103a) -----	2
Pharmacy (Agr. 403a) -----	3
Adv. Pharmacog. (Agr. 404) -----	3
Military Science (Ac. 603) -----	1
Chemical Lab'y (Agr. 110c) -----	6
<i>Pharmaceutical Laboratory</i>	
(Agr. 403b) -----	12

Second Term.

<i>Bacteriology and Bact. Lab'y</i>	
(Vet. 108) -----	6
Adv. Pharmacog. (Agr. 404) -----	4
United States Phar. (Agr. 407) -----	3
†Pharmacology (Vet. 120) -----	3
Organic Chem. (Agr. 103a) -----	2
Pharmacy (Agr. 403a) -----	3
Military Science (Ac. 604) -----	1
Chemical Lab'y (Agr. 110c) -----	6
Alkaloidal Assay (Agr. 403c) -----	9

Third Term.

United States Phar. (Agr. 407) -----	3
Pharmacology (Vet. 120) -----	3
Organic Chem. (Agr. 103a) -----	2
Pharmacy (Agr. 403a) -----	3
Prescriptions (Agr. 405) -----	3
Military Science (Ac. 605) -----	1
Toxicology (Agr. 110e) -----	6
Urinalysis (Vet. 117) -----	3
Prescription Laboratory (Agr. 403d) -----	6
<i>Pharmaceutical Testing and</i>	
<i>Drug Anaylsis (Agr. 403e) -----</i>	<i>6</i>
†Substitute for Bacteriology in latter half term.	

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

FRESHMAN CLASS.

First Term.

H. Wk.

General Chem. (Agr. 101)	4
Physiology (Vet. 104)	2
English (Ac. 102a)	3
Anatomy and Anat. Lab'y (Vet. 107)	10
Histology (Vet. 108)	5
Stock Judging (Vet. 109)	2
Chemical Lab'y (Agr. 110a)	6
Vet. Science (Vet. 102)	2
Clinics (Vet. 112)	3
Military Drill (Ac. 600)	3

Second Term.

General Chem. (Agr. 101)	4
Physiology (Vet. 104)	2
English (Ac. 102b)	3
Anatomy and Anat. Lab'y (Vet. 107)	10
Histology (Vet. 108)	5
Stock Judging (110)	4
Chemical Lab'y (Agr. 110a)	6
Vet. Science (Vet. 102)	2
Clinics (Vet. 112)	3
Military Drill (Ac. 600)	3

Third Term.

General Chem. (Agr. 101)	4
Physiology (Vet. 104)	2
English (Ac. 102b)	3
Stock Judging (111)	2
Anatomy and Anat. Lab'y (Vet. 107)	10
Histology (Vet. 108)	5
Chemical Lab'y (Agr. 110a)	6
Vet. Science (Vet. 102)	2
Clinics (Vet. 112)	3
Military Drill (Ac. 600)	3

SOPHOMORE CLASS.

First Term.

Embryology (Vet. 113)	3
Organic Chem. (Agr. 103b)	3
Anatomy (Vet. 115)	10
Vet. Medicine (Vet. 116)	3
Clinics (Vet. 117)	6
Bacteriology (Vet. 118)	8
Military Drill (Ac. 600)	3

Second Term.

Organic Chem. (Agr. 103b)	3
Anatomy (Vet. 115)	8
Vet. Medicine (Vet. 116)	3
Pharmacy (120)	10
Bacteriology (Vet. 118)	6
Clinics (Vet. 117)	8
Military Drill (Ac. 600)	3

Third Term.

Physiological Chem. (119)	4
Vet. Medicine (Vet. 116)	3
Anatomy (Vet. 115)	8

H. Wk.

Pharmacy (120)	10
Bacteriology (Vet. 118)	6
Botany (121)	5
Clinics (Vet. 117)	8
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

Surgery (Vet. 122)	4
Obstetrics (Vet. 123)	2
Anatomy (Vet. 124)	8
Vet. Medicine (Vet. 126)	3
Botany (125)	6
Vet. Physiology (Vet. 127)	3
Clinics (Vet. 128)	10

Second Term.

Surgery (Vet. 122)	4
Obstetrics (Vet. 123)	2
Anatomy (Vet. 124)	8
Vet. Medicine (Vet. 126)	4
Vet. Physiology (Vet. 127)	4
Infectious Diseases (Vet. 129)	3
Clinics (Vet. 128)	10

Third Term.

Surgery (Vet. 122)	4
Obstetrics (Vet. 123)	2
Vet. Medicine (Vet. 126)	4
Vet. Physiology (Vet. 127)	3
Infectious Diseases (Vet. 129)	3
Anatomy (Vet. 124)	8
Clinics (Vet. 128)	10

SENIOR CLASS.

First Term.

Vet. Medicine (Vet. 130)	3
Therapeutics (Vet. 131)	5
Principles of Breeding (Agr. 808)	2
Surgery (Vet. 135)	2
Meat Inspection (Vet. 138)	3
Pathology (Vet. 137)	7
Clinics (Vet. 136)	8
Thesis (Vet. 143)	4

Second Term.

Therapeutics (Vet. 131)	5
Dairying (Agr. 814)	4
Meat Inspection (Vet. 138)	3
Parasites (Vet. 140)	3
Clinics (Vet. 135)	10
Pathology (Vet. 137)	8
Thesis (Vet. 143)	4

Third Term.

Toxicology (Agr. 110e)	7
Urinalysis (Vet. 117)	3
Milk Inspection (Vet. 139)	5
Surgical Exercises (Vet. 141)	3
Parasites (Vet. 140)	3
Feeds and Feeding (134)	3
Clinics (Vet. 136)	10
Thesis (Vet. 143)	4

DESCRIPTION OF COURSES

ACADEMIC DEPARTMENTS

PSYCHOLOGY AND ECONOMICS.

PROFESSOR THACH.

PROFESSOR RUTLAND.

1. Courses in psychology will be given in the department of education.

2. Economics. The object of this course is to give the student a general view of economics. It includes a study of wealth, value, price, competition, monopolization, production, and distribution; the evolution of industry, and the leading economic questions of today. Collateral reading, oral reports, and occasional written papers are required. *Two hours, second and third terms.*

ENGLISH.

PROFESSOR RUTLAND.

PROFESSOR WHITE.

INSTRUCTOR TAYLOR.

INSTRUCTOR LOVELACE.

ASSISTANT SOWELL.

ASSISTANT NESBITT.

The mastery of one's native language is a pre-requisite to high attainment in any profession. In a technological institute, where only brief courses in foreign language can be pursued by most of the students, this mastery of the native speech becomes, if possible, even more essential to future success than in the classical colleges. This consideration alone would justify courses in English in technological institutions, but when we add to this the great cultural value of the study of language and literature, the wisdom of compulsory courses becomes obvious. The courses in English comprise the study of the theory of composition together with much practice in its application, both in writing and in speaking, a survey of the history of American and English literature, and an intensive study of the greatest periods and writers in English literature.

Requirements in English for admission are set forth on page 26. No student will be classed as regular in any course until he has met these requirements.

The requirements as to thesis and as to proficiency in

English for certificates and diplomas are set forth on pages 33 and 147.

The following courses are offered:

FRESHMAN CLASS.

102. (a) Composition for freshmen. The principles of exposition, narration and description are studied, but special emphasis is given to the different types of exposition. Weekly themes and frequent exercises are required. When practicable, the instructors hold fortnightly conferences with students in order to correct, assist and stimulate them. Textbook to be announced. *Three hours, first term; two hours second and third terms.*

(b) American literature for freshmen. A survey of the history of American literature together with the study of selected masterpieces. The recitations will be devoted chiefly to the discussion of the literature assigned for study, but the students will be required to master a concise history of the subject and to keep notes on both the history and the selections. Text-books to be announced. *Three hours, second and third terms.*

(c) Types of literature. This course is an appreciative study of some of the chief literary types—the essay, the drama, lyric and narrative verse, and the novel. Illustrative readings will be selected for the most part from American literature, but not entirely. *Two hours, first term.*

(d) Public speaking. This course is a study of the principles of public speaking. Attention is given to voice building, bodily expression, and oral interpretation of selected speeches. Those taking the course during first term will substitute it for (c), those taking it in the second or third terms will substitute it for (a). Text-book: Winter's *Principles of Public Speaking*. *Two hours, half term.*

SOPHOMORE CLASS.

103. (a) Argumentation for sophomores. This course consists of the study of the essentials of argumentation and requires extensive practice in gathering material, note-making, brief-making, analysis and criticism of evidence, and practical debating. Weekly themes in argumentative form and one lengthy argument at the end of the course are required. Text-book: Pattee's *Practical Argumentation*. *Three hours, first term.*

(b) Debating for sophomores. All sophomores are required to meet at least once fortnightly at some other hour than the regular recitation period for drill in parliamentary law and for practice in actual debating.

(c) English literature for sophomores. This course covers

the whole range of English literature from Anglo-Saxon times to our own, and consists of the interpretive and critical study of selected poetry and prose. The aim is to give the student not only a definite conception of the periods of literature and of the forces in life that found expression in literature, but also an appreciative understanding of the greater writers and productions. The students are required to keep full notes on the lectures as well as on the class study of selections. Text-books to be announced. *Three hours, second and third terms.*

(d) Public speaking. This course may be chosen by sophomores instead of the actual debating required in (b). It is a study of the ends of speech-making and the means of securing effectiveness. Emphasis is placed upon the principles of composition and comprises practical exercises in collecting and organizing material in addition to the study of style and structure of selected speeches and readings. Text-book: Phillips' *Effective Speaking*.

JUNIOR CLASS.

107. In the junior and senior years students pursuing the general course may form a separate section from the rest of the class. This section is required to do a greater amount of reading and written work than the technical students. Juniors may elect one of the following courses, but the department reserves the right to omit a course in case only a very small number elect it.

(a) Nineteenth century literature. The time will be about equally divided between Wordsworth and his contemporaries and the writers of the Victorian period. The course will involve wide reading, discussions of the technique of the writers, their art, growth of mind, general interpretation of life, and their relation to their own time and discussions of the various movements in science, politics, philosophy, and art in their relation to the literature of the period. The work is carried on partly by lectures and partly by class study of representative masterpieces. Students will be required to take notes on both lectures and class discussions, and to write weekly reports or themes. Text-book will be announced. *Three hours, entire session.*

(b) The essay and the novel. The larger part of the first term will be given to the study of the origin and development of the English Essay. Selected essays representing the seventeenth and eighteenth centuries will be read, and much time will be devoted to the essay of the nineteenth century. The rest of the year will be devoted to the history of the novel. Representative novels from the eighteenth century to the present time are studied; and special attention is given to technic, plot and character analysis, relation to other forms

of literature, the writer's conception of his art, and style. Text-book to be announced. *Three hours, entire session.*

(c) Contemporary literature. This course includes a study of recent tendencies in the drama, novel, short story and essay. Magazines such as the Atlantic Monthly, the Nation or the Dial are used as points of departure, but most of the work will consist of extensive assigned readings out of class, together with class-room reports and discussions. Open also to seniors. *Three hours, entire session.*

SENIOR CLASS.

108. The following courses are offered for seniors:

(a) Shakespeare. The development of the English Drama before Shakespeare will be reviewed briefly through assigned reading and lectures and the life of Shakespeare will be included in the matter for final examination, but the class room instruction will be devoted chiefly to a careful study of the plays. During the first few weeks several plays of the different types and representative of the different periods of authorship are given brief treatment. Most of the time, however, is given to the close study of two plays, one comedy, and one tragedy. Text-books to be announced. *Two hours, first term.*

108b. Advanced composition for engineering students. This course is open to both seniors and juniors. The work will consist of themes on technical subjects and quizzes based upon technical reading. Weekly themes of from 1000 to 1500 words are required. There will be individual conferences and class discussions of the papers submitted. The course includes training in condensing and expanding articles, and the making of reports. The second term is given to the production of a weekly technical magazine. The third term is given to the writing, in weekly chapters, of extended themes. The class will be limited to twenty students.

108c. Advanced composition for Agricultural students. A parallel course to 107b.

110. Methods of teaching English. If a sufficient number of students apply to the head of the department, a course in methods of teaching English will be offered, the text-book and hours to be determined later.

GRADUATE STUDENTS.

The following courses have been given to graduate students:

(a) Shakespeare: Hamlet, Othello, Macbeth, Merchant of Venice, As You Like It, Henry IV, Richard III, King John.

(b) Dryden's Poetical Works: Arnold's Dramatic Poesy, Yonge's Essay on Satire, Saintsbury's Dryden, Pope's Poetical Works, Pattison's Satire, Stephen's Pope, Gosse's From Shakespeare to Pope, and Eighteenth Century Literature.

(c) English literature of the eighteenth century: Addison, Pope, Gray, Goldsmith, Burns, Cowper and Burke.

(d) American literature: Longfellow, Lowell, Poe.

(e) The English Essay: Bacon, Addison, Steele, Swift, Johnson, Goldsmith, Macaulay, DeQuincey, Lamb, Carlyle.

(f) Milton's Poetical Works: Life, Pattison, Brooke.

(g) Elizabethan, Jacobean, and Caroline literature; Greene, Jonson, Marlowe, Webster, Beaumont, and Fletcher, Brown, Herrick, Bunyan and others.

(h) English literature, 1832-1894.

(i) Chaucer.

(j) English prose fiction.

For the year 1917-18, one of the following courses may be elected by the graduate class:

Anglo-Saxon: A study of the grammar and phonology of Anglo-Saxon, together with the reading of select prose and verse. The class will probably read a portion of Beowulf.

Chaucer: A study of the life and times of Chaucer, together with the readings and critical study of a large portion of his collected writings.

Prose fiction: A study of the development of English fiction, with special emphasis upon the modern novel.

Shakespeare: A critical study of the dramatist's art.

HISTORY AND LATIN.

PROFESSOR PETRIE.

INSTRUCTOR REYNOLDS.

ASSISTANT ANDREWS.

ASSISTANT SOWELL.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that history is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. The students are taught to investigate the growth of ideas and institutions, the rise and progress of great historical movements, and the reciprocal influences of men and circumstances. Frequent use is made of diagrams, photographs, charts and maps, with which the department is well equipped. Instruction is given by text-books, lectures and class discussion, but a constant effort is made to stimulate to wider reading and research in the library. The following courses are offered:

FRESHMAN CLASS.

201. Industrial and constitutional history of the United States: The course consists of lectures and text-book work,

and is somewhat advanced. All students who take it must have previously completed some high school text-book on the history of the United States. Text-books: Hart's Formation of the Union; Wilson's Division and Reunion. *Two hours, entire session.*

SOPHOMORE CLASS.

202. History of Modern Europe: Required of all members of the sophomore class. Some previous knowledge of the subject is desirable, but is not necessary. Text-book: Hazen's Europe Since 1815. *Two hours, first and second terms.*

204. A brief course in recent history: Not required of any students, but those who expect to take the general course may take this work. Text-book: Hazen's Europe Since 1815, and current periodicals. *Three times a week, third term.*

SENIOR CLASS.

205. English constitutional history: A course for one year for members of the senior class. Text-book will be announced later.

JUNIOR AND SENIOR CLASSES.

206. Historical laboratory: An opportunity for advanced work in United States history, for those students of the general course who elect it as laboratory work, and for any others who are properly qualified.

The chief object kept in view is training in historical research and in the formation of independent but careful opinions based on the original sources of information, as well as on the standard authorities. Emphasis is laid on the importance of securing proper material for investigation, and every incentive is given to the collection and use of new documents, papers, and letters illustrative of Southern, and especially of Alabama history. The method of work is as follows: Informal lectures are given on important and suggestive points, as: The cause of the Revolution; the Constitutional Convention; the War of 1812; the Missouri Compromise; the Monroe Doctrine; Texas and Mexico; the Compromise of 1850; the Kansas Struggle; the Dred Scott Decision; Secession. After each lecture a general discussion follows, and topics connected with it are assigned to the students with an outline of the points to be investigated. The final results are collected by each student according to his own judgment in his note-book, which is then passed in to the professor for correction and suggestion. Text-book: McDonald's Select Statutes. *Six hours, entire session.*

International Law: Brief courses are offered for all juniors and seniors. See Military Science and Tactics, pp. 73, 74. *One hour a week for five weeks.*

Military History: A course of five lectures discussing the strategy of the wars in which the United States have been engaged. This is for all juniors. See *Military Science and Tactics*, p. 73.

GRADUATE COURSE.

207. Graduate students are expected to take part in the junior and senior discussions, and will also meet with the professor for conference about their work. Each year some special field is taken for investigation and discussion. Those who take history as their major study are expected to devote a large part of their time to research upon some topic upon which they can consult the original sources of information.

208. Teachers' course: Conferences every other week with those students who expect to teach history.

LATIN.

The objects kept in view in this department are: An accurate knowledge of the forms and syntax; a familiarity with Latin words, their etymology and their English derivatives, an appreciation of Latin literature and an intelligent conception of Roman history and civilization, both in themselves and in their effect on the modern world.

A systematic course of instruction is given in the forms and syntax. These are taught both deductively from a grammar and inductively from the text read. Translation is constantly practiced, sometimes at sight, sometimes after being assigned for preparation. English passages based on a familiar author or illustrative of special constructions are put in Latin, both orally and in writing. Great emphasis is laid on the etymology of the words in the text read.

In connection with every author studied in class, a course of reading in English is prescribed descriptive of his life, work and times. The historical setting and the literary value of his writings are carefully discussed, and frequent comparisons are made with modern authors.

In the freshman and sophomore classes, the study of the language is the chief point. In the higher classes a broader view is taken. The junior class makes a special study of Roman history and Roman historians. The senior class studies Roman poetry and Roman life.

The following courses are offered with the text-books named:

209. Freshman class: Exercises, Cicero, Sallust, or equivalent. Allen and Greenough's *Latin Grammar*. *Three hours, first term; four hours, second and third terms.*

210. Sophomore class: Livy, Allen and Greenough's *Grammar*, Bennett's *Latin Composition*. *Five hours, entire year.*

211. Junior class: Livy, Tacitus, grammar, Roman History, exercises. Allen and Greenough's Grammar, Botsford's History of Rome. *Three hours, entire year.*

212. Senior Class: Horace, Plautus, Latin literature, grammar. Allen and Greenough's Grammar. *Three hours, entire year.*

213. Pedagogical course: During the spring term a pedagogical course is given in Latin. It is designed chiefly, but not exclusively, for members of the senior class. It includes a discussion of the methods of teaching forms and syntax, as well as concrete illustrations of the way to overcome the difficulties in Caesar and Virgil.

MODERN LANGUAGES.

PROFESSOR WIATT.

ASSISTANT ELIZONDO.

The chief aim in this department is to give the student a thorough and accurate knowledge of the elementary principles of the subjects taught, and to enable him to read with facility the ordinary French and German at sight. To train the ear, acquire a correct pronunciation and some facility in speaking, all recitations are supplemented, as far as practicable, by oral exercises in the languages themselves.

Opportunity for the study of Spanish is given students who elect that language.

FRENCH.

JUNIOR CLASS.

301. (a) A course covering the essentials of grammar and pronunciation to enable the student to begin the reading of simple French prose. This course continues through the first term, three hours a week being given to the study of grammar and one hour to pronunciation and conversation. *Four hours, first term.*

(b) The second term includes a course of reading in simple prose (2 hours a week), and the continuation of grammar with translations of English into French (1 hour a week). *Three hours, second term.*

(c) During the third term the reading of more advanced selections in prose and poetry is begun (2 hours a week), grammar and composition (1 hour a week); and pronunciation and conversation (1 hour a week). *Four hours, third term.*

SENIOR CLASS.

302. (a) A course in reading: Corneille and modern French plays (2 hours a week); laws of grammar and composition

(1 hour a week); pronunciation and conversation (1 hour a week). *Four hours, first term.*

(b) The second term is given to the study of Racine, and the reading of modern French literature (2 hours a week), and to continued study of the structure and syntactical features of the languages in connection with translations into French. *Three hours, second term.*

(c) The third term includes a study of Moliere (1 hour a week); the history of French literature (1 hour a week); more advanced work in grammar and composition (1 hour a week); and pronunciation and conversation (1 hour a week). *Four hours, third term.*

303. Teachers' course: During the spring term the work of the senior class will be so modified or supplemented, as to include a short pedagogical course for students who expect to teach French. This will consist chiefly of elementary work in grammar and syntax, and a study of the best methods of giving instruction in this subject. *Third term, senior year.*

GRADUATE STUDENTS.

304. Graduate course: Offered for students who wish to pursue the study of French beyond the scope to which a two-year course necessarily limits them. In addition to the authors studied in the lecture room, a wide and extensive reading of literature is prescribed.

TEXT-BOOKS.

First year: Frazer and Squair's Shorter French Course; Koren and Chapman's French Reader.

Second year: Corneille, Racine, Moliere, selected modern French plays, Duval's Histoire de la Literature Francaise; Frazer and Squair's French Grammar, French Composition.

GERMAN.

The following regular courses are given:

JUNIOR CLASS.

305. (a) A course embracing the fundamental principles of grammar and the essentials of pronunciation leading to the intelligent reading and translation of simple German texts (3 hours a week), and exercises in pronunciation and conversation (1 hour a week). *Four hours, first term.*

(b) In the second term the reading of simple prose is begun (2 hours a week), and grammar and composition continued (1 hour a week). *Three hours, second term.*

(c) Reading of more difficult selections of prose and poetry is begun and continued throughout the third term (2 hours a week). Grammar and composition continued (1 hour a week), and conversational exercises (1 hour a week). *Four hours, third term.*

SENIOR CLASS.

306. (a) A course of reading in modern German (2 hours a week); structure and syntax of the language with translations into German (1 hour a week); conversation (1 hour a week). *Four hours, first term.*

(b) Schiller (2 hours a week); History of German Literature and composition (1 hour a week). *Three hours, second term.*

(c) German lyrics and ballads (2 hours a week). German literature (1 hour a week), composition and conversation (1 hour a week). *Four hours, third term.*

307. A course for students from the scientific schools, including readings of various scientific subjects, selected to meet the requirements of the class (2 hours a week), grammar and composition (1 hour a week), and conversation (1 hour a week). *Four hours, entire session.*

308. Teachers' Course: During the third term in the senior class of German, the course will be so modified, or supplemented, as to include a short pedagogical course for those students who expect to become teachers of this language. This will consist chiefly of elementary work in grammar and syntax, and a study of the best methods of giving instruction in the subject.

GRADUATE STUDENTS.

309. Advanced course: For those students who wish to pursue the study of German beyond the scope to which a two-year course necessarily limits them. Here, in addition to the authors studied in the lecture room, a wide and extensive reading of authors and literature is prescribed.

TEXT-BOOKS.

First year: Wesselhoeft's German Grammar, Huss's German Reader.

Second Year: Schiller, Lessing, selected modern German plays, German lyrics, Bernhardt's Deutsche Litteraturgeschichte, Harris's German Grammar, German Composition.

SPANISH.

310. A course in Spanish is also given, embracing the fundamentals of the language, consisting of a study of the grammar, readings of modern Spanish selections and exercises in conversation. *Three hours, entire session.*

Texts: Ingraham-Edgren's Brief Spanish Grammar; Turrell's Spanish Reader.

MATHEMATICS.

PROFESSOR CRENSHAW

PROFESSOR MESSICK.

PROFESSOR SHI.

PROFESSOR PATRICK.

INSTRUCTOR STOKES.

INSTRUCTOR DONAHUE.

ASSISTANT FARRIS.

ASSISTANT OWENS.

The courses of instruction offered in this department are designed to give the student that mental discipline and training in logic which will enable him to think and reason logically; as well as a thorough knowledge of the principles and formulas of pure mathematics and their practical applications in the engineering and other scientific professions.

The courses offered in the different classes in this department are as follows:

FRESHMAN CLASS.

401. Plane Trigonometry. *Five hours, first term.*402. Advanced Algebra. *Five hours, second and third terms.*

SOPHOMORE CLASS.

403. Analytic Geometry. *Five hours, first and second terms.*404. Introductory Course in Calculus. *Five hours, third term.*

JUNIOR CLASS.

405. Calculus. *Five hours, entire year.*

GRADUATE STUDENTS.

407. Differential Equations. *Two hours, entire year.*

408. Methods of teaching mathematics. The department offers a course designed for teachers of elementary mathematics, or for those who expect to make this their profession. The elementary branches of mathematics will be reviewed and methods of teaching briefly discussed, keeping constantly in view the co-ordination of the lower branches with the higher. The course will include also a brief *resume* of the history of the elementary subjects, a critical examination of the extant text-books; and finally, an outline of a course of study in advanced mathematics to be pursued by the teacher.

409. Projective Geometry. This course which aims to present the elements of the subject, will be offered to seniors and graduate students in architecture and engineering, and to those properly equipped who wish to pursue the subject of mathematics. *Hours to be arranged, third term.*

TEXT-BOOKS.

Palmer and Leigh's Trigonometry; Fite's College Algebra; Fine and Thompson's Coordinate Geometry; Smith and Granville's Elementary Analysis; Granville's Calculus; Leib's Problems in the Calculus; Cohen's Differential Equations.

PHYSICS.

PROFESSOR DUNSTAN.

ASSOCIATE PROFESSOR WOOTEN.

INSTRUCTOR SPANN.

ASSISTANT FARRIS.

The complete course in physics extends over two years and it is designed to give as far as possible an adequate and correct idea of the method of physical science, and to lay the foundation for subsequent advanced work if the student desires to pursue the work further or intends to engage in any of the great engineering professions of which physics forms so important a basis.

Two of the courses offered are given in the sophomore year, one being a lecture course and the other a course in laboratory work. The lectures are illustrated by lecture table experiments, and the students are required to work numerous problems and exercises.

SOPHOMORE CLASS.

504. A lecture course in general physics required of all students who are candidates for the degree of Bachelor of Science. For entrance upon this course the student should have had one year's work in elementary physics and a working knowledge of plane trigonometry. The subjects treated are varied from year to year, but they consist in the main of mechanics of rigid bodies, heat, light, sound, electricity, etc. Written exercises will be required each week. *Three hours, entire session.*

502. This is a laboratory course which is required of all students in engineering. Non-engineering students may select it as an optional subject. The laboratory experiments are carefully selected and they comprise work in general mensuration with instruments of precision, heat, light, sound and electricity. The student is required to write a full report of each experiment as he completes it, and the form of compiling data and expressing methods and results is given great weight in determining average grades. The work in the laboratory will be arranged so as to co-ordinate as far as possible with the work treated in the lecture course. Entrance upon the laboratory course requires the student shall have had at least one year of elementary physics. *Two hours, entire session.*

SENIOR CLASS.

505. This lecture course is more advanced than the one given to the sophomores and it presupposes a knowledge of the calculus, both differential and integral. The subjects treated are varied from year to year. They are treated thoroughly and rigorously, and the student is encouraged to learn to use the language of mathematics in expressing his ideas. Attention is paid to the history of the development of the various subjects treated. Written exercises are required each week. *Two hours, first and second terms.*

506. Astronomy. A brief course in descriptive astronomy. *Two hours, third term.*

GRADUATE STUDENTS.

508. Mechanics. A course in mechanics is offered in which the methods of vector analysis are applied to the derivations of various principles and in the solutions of various problems. The course presupposes a thorough working knowledge of analytical geometry and the calculus. *Two hours, entire session.*

MILITARY SCIENCE AND TACTICS.

CAPTAIN FRANK W. ROWELL, U. S. A.

The military department is maintained under the Federal Law of July 2nd, 1862, and the Act of Congress, June 3rd, 1916.

Under the latter law a regimental unit of the Senior Division of the Reserve Officers' Training Corps is organized under the administration of the War Department and the supervision of the Commanding General, Eastern Department.

An officer of the Regular Army is detailed as Professor of Military Science and Tactics. He is assisted by three sergeants detailed from the army.

The Professor of Military Science and Tactics is, by the appointment of college authorities, the Commandant of Cadets.

Under the Act of June 3rd, 1916, the College is provided with arms and equipments, and a uniform is furnished by the Government for issue, by the College, to each member of the Reserve Officers' Training Corps. The uniform remains the property of the Government, and is for the use of the student only while he remains a member of the Training Corps. Insignia of rank are purchased by the cadet, at a small cost.

The course of instruction is a graded course, covering four years. When any member of the Senior Division of the Reserve Officers' Training Corps has completed two academic years in that division, and has been selected for further training by the president of the institution and by its professor of

military science and tactics, and has agreed in writing to continue in the Reserve Officers' Training Corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, and has agreed in writing to pursue the courses in camp training prescribed by the Secretary of War, he may be furnished, at the expense of the United States, with commutation of subsistence at such rate, not exceeding the cost of the garrison ration prescribed for the army, as may be fixed by the Secretary of War, during the remainder of his service in the Reserve Officers' Corps.

The course in camp training prescribed by the Secretary of War consists of two summer camps, not to exceed six weeks in any one year. Transportation to and from the camps and subsistence during such travel and while at the camp is furnished at the expense of the Government, as far as appropriations will permit.

No obligation to perform military service after graduation is incurred by the student.

The object of the military training in the Reserve Officers' Training Corps is to educate college men in the duties of a subaltern officer in the Army. After graduation he is as free as any other citizen.

The following uniform of standard cadet grey cloth has been prescribed for dress: coat and trousers as worn in the fatigue uniform at the United States Military Academy; cap, dark blue cloth with mohair braid band and brass cap ornament; shoes, tan leather. This uniform is purchased by the student.

The following uniform has been prescribed for summer wear, and to be worn at such times as may be ordered by the Commandant: trousers, grey dress; shirt, olive drab woolen cloth of approved shade and quality; cap, same as dress; shoes, same as dress; tie, black string tie of medium length; waist belt, woven web of olive drab color. The cost of shirt, tie and belt is about \$3.50.

The entire body of students is organized as a regiment of two battalions and a band. The officers are selected as far as practicable from among the seniors and juniors who are pursuing the Advanced Course of the Reserve Officers' Training Corps. Selection is based upon an examination for each grade from corporal to captain inclusive. Moral fitness, including demerits and standing in studies, will be considered.

A band composed of cadets furnishes appropriate music for parades and other ceremonies and on special occasions. Members of the Reserve Officers' Training Corps are authorized

to serve in the band so long as their regular course of instruction is not interfered with.

On the graduation of each class the names of such students as have shown special aptitude for military service will be reported to the Adjutant General of the Army, and to the Adjutant General of their respective states.

On graduation from the military department a student may make application for appointment as an officer in the Officers' Reserve Corps and when he has been appointed in that Corps he may make application for temporary commission as an additional second lieutenant in the Regular Army for a period of six months with full allowances and with pay of \$100.00 per month. Both applications are made voluntarily. The graduates of the Reserve Officers Training Corps are entitled to make application but there is no obligation to do so.

600. Basic Course:

FRESHMAN CLASS.

1. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment.

(b) Theoretical. Weight 4.

Theory of target practice, individual and collective (use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene.

2. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry Drill Regulations); bayonet combat; intrenchments (584-595, Infantry Drill Regulations); first-aid instruction; range and gallery practice.

(b) Theoretical. Weight 4.

Lectures, general military policy as shown by mili-

tary history of United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations, to include School of Company; camp sanitation for small commands.

SOPHOMORE CLASS.

3. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

The same as course 2 (a). Combat firing, is practicable, but collective firing should be attempted in indoor ranges by devices now in vogue at United States Disciplinary Barracks.

(b) Theoretical. Weight 4.

United States Infantry Drill Regulations, to include School of Battalion and Combat (350-622); Small Arms Firing Regulations; lectures as in (b) course 2; map reading; camp sanitation and camping expedients.

4. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

The same as course 2 (a); signaling; semaphore and flag; first-aid. Work with sand table by constructing to scale intrenchments, field works, obstacles, bridges, etc. Comparison of ground forms (constructed to scale) with terrain as represented on map; range practice.

(b) Theoretical. Weight 4.

Lectures, military history (recent); service of information and security (illustrated by small tactical problems in patrolling, advance guards, rear guards, flank guards, trench and mine warfare, orders, messages, and camping expedients); marches and camps (Field Service Regulations and Infantry Drill Regulations).

ADVANCED COURSE.

(Elective for those who have completed the basic course).

JUNIOR CLASS.

601-602 Advanced Course:—

5. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Duties consistent with rank as cadet officers or non-commissioned officers in connection with the

practical work and exercises laid down for the unit or units. Military sketching.

(b) Theoretical. Weight 11.

Minor tactics; field orders (studies in minor tactics, United States School of the Line); map maneuvers. Weight 8.

Company administration, general principles (papers and returns). Weight 1.

Military history. Weight 2. Professor Petrie.

6. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Same as (a) course 5. Military sketching.

(b) Theoretical. Weight 11.

Minor tactics (continued); map maneuvers. Weight 8. Elements of international law. Weight 2. Professor Petrie.

Property accountability; method of obtaining supplies and equipment (Army Regulations). Weight 1.

SENIOR CLASS

603-605. Advanced course:

7. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching.

(b) Theoretical. Weight 11.

Tactical problems, small forces, all arms combined; map maneuvers; court-martial proceedings (Manual for Courts-martial).

International relations of America from discovery to present day; gradual growth of principles of international law embodied in American diplomacy, legislation, and treaties. Professor Petrie.

Lectures: Psychology of war and kindred subjects. General principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed 5 lectures).

8. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Same as course 7 (a).

(b) Theoretical. Weight 11.

Tactical problems (continued); map maneuvers.

Rifle in war.

Lectures on military history and policy.

EDUCATION.

PROFESSOR JUDD.

PROFESSOR BLASINGAME.

The Department of Education was established by order of the Board of Trustees, June, 1915. This action was taken:

1. Because a large number of the graduates of the Institute each year enter the field of education as teachers and principals.
2. Because of the increasing demand in the State of Alabama for professionally trained teachers.
3. Because of the new emphasis on rural life and education, creating a demand for teachers and principals acquainted with the rural sciences and industries in the district agricultural and the county high schools.
4. Because of the increasing number of positions in the city schools requiring teachers especially trained in the sciences.
5. Because of the increasing demand for men of academic and professional training for the position of county superintendent.

For several years the Institute has offered courses in special methods in some of its departments. It has worked in co-operation with the district agricultural and county high schools through furnishing a visitor and inspector, whose reports are regularly filed with the State Department of Education.

PURPOSE.

The Institute purposes, through its various Colleges and the Department of Education, to meet as liberally as possible the demands from the several divisions of the field of education as indicated above. It does so with a consciousness of obligation in two directions:

1. To the State—whose creature it is, from which it draws support, and to which it owes the most faithful, efficient, and complete service.
2. To its students—who elect to pursue here courses in academic and scientific subjects, necessary as a fundamental preparation for teaching.

The State Department of Education, by recent ruling, will grant to certain graduates of the leading colleges of Alabama first grade and life certificates. The requirements for these certificates are that graduates must have pursued courses in education totaling a minimum of nine session hours.

The courses offered for the fulfillment of these requirements are:

Education 2. Principles of Education. *Three hours, the year.*

Education 5. Secondary Education. *Three hours, first term.*

Education 6. Principles and Practice of Teaching. *Three hours, second and third terms.*

Education 7. Educational Sociology. *Three hours, first term.*

Education 8. Rural Educational Practice. *Three hours, second term.*

Education 9. School Supervision. *Three hours, third term.*

COURSES OF INSTRUCTION.

Education 1. Elementary Psychology and Educational Psychology: Text-books, lectures, and assigned readings. Elective for both academic and professional students of junior standing.

The aim of this course is twofold:

1. To introduce the student to the subject-matter and methods of general psychology.

2. To present the psychological principles which underlie the process of learning.

For present year this course is open only to students who have taken, or are taking, Education 2, 5, and 6, and with the consent of the professor in charge. *Three hours, the year.*

Education 2. Principles of Education: A consideration of the aims, principles, and processes of education. Lectures, readings, and discussions. Elective for both academic and professional students of junior and senior standing. Required of applicants for recommendation for the State Teacher's Certificate.

This course will present a scientific study of education from the psychological, biological, and sociological points of view. The considerations will be the nature of the educable being and the character of his environment, adjustment to which and control over which constitute the chief aim of education. *Three hours, the year.* Sec. I. *M., Tu., Th.* 8-9; Sec. II. *M., W., F.* 9-10.

Education 3. A study of Adolescence: Devoted to a consideration of the characteristics and needs of the high school age. Elective for both academic and professional students of junior and senior standing. Text-books and lectures.

The objects of the course are:

1. To discover as far as possible the natural tendencies and characteristics of the period of youth.

2. To determine how they can best be brought to a successful issue in maturity, through the proper adaptation of the organization and administration of the high school to the physical, mental, and social needs of boy and girl life.

Attention is called to Education 4, which constitutes the second half-year's work. *Three hours, first half-year.*

Education 4. Sociology: An elementary study of society and social problems. Elective for both academic and professional students of junior and senior standing. Text-books, lectures, and discussions.

The object of this course is to acquaint the student with the nature, laws, and objects of society, as conditioning the content and method of education.

Attention is called to Education 3, which constitutes the first half-year's work. *Three hours, second half-year.*

Education 5. Secondary Education: The American High School, its organization, management, and administration. Text-books, assigned reading, reports, and discussions. Elective for both juniors and seniors in Education. Required of applicants for recommendation for the State Teacher's Certificate.

A critical examination of typical high schools, emphasizing the function, course of study, social needs, equipment, training and qualification of teachers, and similar matters of administration. Especial emphasis will be placed upon the high school curriculum, including the best modern methods, equipment and material pertaining to the teaching of the different high school subjects. A study of the special problems confronting Alabama with respect to the establishment and development of public high schools. Throughout the entire course, the relation of the high school to the community will be stressed. *Three hours, first term.*

Education 6. Principles and Practice of Teaching: A study of the principles of school management, discipline, and teaching. Text-books, lectures, observations, reports, and discussions. Elective for juniors and seniors in Education. Required of applicants for recommendation for the State Teacher's Certificate.

Observations in local city and rural schools, planning of lessons, criticism of recitation work. Illustrative lessons in the several subjects of the course of study. The work of the course will consider the practical problems of the classroom in their relation to the life of the community. *Three hours, second and third terms.*

Education 7. Educational Sociology. Foundations of the School as a Social Institution: Lectures, readings, and discussions. Elective for both academic and professional students of junior and senior standing.

The social and industrial character of present-day country life, and the district, village, and town school as its chief institution will be the concerns of this course. The chief problems of the home, the farm, and the associational life of the community will be discussed. The country school evolved

in the endeavor to offer solutions to these problems will be defined. *Three hours, first term.*

Education 8. Rural Educational Practice: A survey and an evaluation of the practice of typical town and country schools. Assigned readings, investigations, reports, and discussions. Elective for seniors in Education, and for teachers of experience.

It will be the purpose of this course to acquaint the student with the best practice found in our town and country schools. A survey of the work of some of the better district, village, and town schools of the United States will be made. Special features will be noted and an attempt made to evaluate them in terms of the environs of and the demands upon one's own school. The teacher's relation to the larger phases of school development, and the daily problems arising in and about the school will receive attention. Bulletins from the United States Bureau of Education and from the various State departments of education, and other special publications will be read. *Three hours, second term.*

Education 9. School Supervision: The principles and the administration of school supervision. Text-books, lectures, observations, and conferences. Elective for seniors in Education and for teachers of experience.

The principal topics considered in this course will be:

1. Supervisory officers—superintendent and special supervisors.

2. General plan of supervision—training of teachers in service, schoolroom visits, aids to teachers.

3. Observation and criticism of the process of instruction—standards of the recitation, application of these standards as modified by local conditions, preparation of the recitation by teachers and pupils, conference with teachers, demonstration teaching by supervisor. *Three hours, third term.*

Education 10. School Curricula: An examination and an evaluation of social materials, and the principles in the construction of courses of study. Assigned readings, investigations, and reports. Elective for advanced students in Education.

The content and organization of courses of study will constitute the considerations of this course. An effort will be made to formulate the chief sociological demands of country life and to make out courses of study suitable to typical social and industrial situations. Concrete contributions of normal schools and schools of education in the leading colleges and universities and of specialists in education will be studied. Reports on first-hand investigations, and specimen curricula will be required. *Two hours, the year.*

Education 11. Library Methods: Organization, administration, and equipment: Lectures and practical work in the library. Open to seniors in Education.

The aim of this course is to train intending teachers in the organization, care, and administration of a school library. Particular regard will be had for the selection of books suitable to school and community needs, and for the adjustment of the reading hours to the occupations and customs of the neighborhood. *One hour, the year.*

Courses in Education for which hours have not been assigned, will be scheduled at the opening of the fall session. Persons interested in the Department of Education are requested to write for the special bulletin.

METHODS IN TEACHING SPECIAL STUDENTS.

Courses in special methods in teaching the various subjects designed for teachers in the schools of Alabama, and for intending teachers, will be offered upon application to the head of the department. The instruction is given by teachers of extensive experience, who are familiar with school conditions in the State.

Courses are offered in the following subjects:

English, History, Latin, French, German, Mathematics, Physics, Manual Training, Physical Geography, Drawing and Descriptive Geometry, Chemistry, Agriculture, Physiology and Hygiene, and Horticulture. Descriptions of these courses will be found in their respective departments.

SUMMER SESSION.

The Summer Session for 1917 will open on June fourteenth and continue to July twenty-fifth.

COURSES OF STUDY.

For College Credit: Those subjects most in demand will be offered every summer. Others will be offered once in alternate summers, still others, once in four summers. The aim will be to give opportunity to any student attending four summer sessions to pursue any study offered during the college year.

For Entrance Credit: Courses in high school history, English, Latin, mathematics, and others for which there may be sufficient demand.

Teachers' Courses: Special courses for teachers in high school physics, history, English, geography, physiology, drawing, mathematics.

The Newer High School Subjects: Agriculture, horticulture, animal husbandry, household economics, and manual training. Two aims will dominate these courses: First to present the

subject-matter with a view of giving the teachers a thorough mastery of it; second, to indicate to them what portions of these subjects they may undertake to teach in the high school and how to select or improvise the necessary equipment.

Professional Courses: Psychology, educational psychology, school management and methods, supervision, administration, and rural sociology.

Elementary Methods: A course in primary and grammar grade methods, library methods, public school music, plays and games for children, writing and drawing, the common branches.

PURPOSE.

It will be the purpose through these courses to meet the needs of:

1. The various types and classes of teachers in the State of elementary, high school, and college level.
2. College students who wish by means of summer study to shorten their term in college or to make up back studies.
3. Prospective college students, who may be irregular in their studies, and who wish to remove entrance conditions.

FACULTY.

The Summer Session faculty will comprise members of the regular college staff, specialists in education from other institutions, and practical supervisors and superintendents.

EXPENSES.

The cost of attendance upon the summer session is moderate. Board and lodging for the session may be secured for \$20 to \$30. The registration fee is \$3.00. Tuition is free to all pursuing courses for teachers. A small fee is charged for laboratory courses, for college credit and entrance courses, and for certain courses in athletics.

FULL ANNOUNCEMENT.

The Summer School Bulletin announces courses and members of the faculty, and gives all needed information. Persons interested may obtain a copy of the bulletin upon request.

COLLEGE OF ENGINEERING, MINES AND ARCHITECTURE

CIVIL ENGINEERING.

PROFESSOR MITCHAM.

ASSISTANT PROFESSOR STELZENMULLER.

ASSISTANT SMITH.

FRESHMAN CLASS.

102. Plane surveying and levelling: Instruction is given in the use, care, and adjustment of instruments; standardizing tapes; determination of true meridian and magnetic declination; U. S. Public Land Surveys; methods of retracing old lines; farm surveys by various methods; plotting and calculating areas; dividing lands; surveying and mapping existing roads and streets; laying out townsites and establishing permanent monuments for same; differential levelling; profile levelling; construction of profiles and establishing grades; cross-section levelling; calculation of volumes of excavation and embankment; topographic surveying; mapping; terracing; staking out and giving grades for sewers, ditches, and drains; staking out buildings, etc. *Lectures and recitations, three hours, field practice two hours, second and third terms.*

SOPHOMORE CLASS.

103. Higher surveying: Required of civil engineering students. Instruction will cover hydrographic surveying; mining surveying; city surveying; geodetic surveying and projection of maps. *Lectures and recitations two hours, field practice two hours, third term.*

104. Railway surveying: Required of students pursuing courses in civil and mining engineering. Instruction will cover preliminary surveys; theory of simple, reversed, and compound curves; transition curves; railway grades; vertical curves; construction surveys; calculation of quantities involved in railway construction. *Three hours recitations and two hours practice, first term.*

106. Railway surveying: A course involving additional study of the railroad spirals; problems in location; fixing grades with reference to economy in construction and operation; approximate estimates of quantities from profiles; cross-sectioning and calculating of excavation and embankment; calculation of overhaul; borrow pits; planning, and staking out

railway structures. *Two hours recitations and two hours field and office practice, second term.*

JUNIOR CLASS.

107. Roads and pavements: A course of lectures and recitations covering economic principles involved in road improvement; analysis of resistance to traction; location, grades, and drainage of new roads; relocation and improvement of existing roads; construction of earth, gravel, macadam, concrete, brick, and bituminous roads, with study of properties of the various materials used in road construction, the methods employed in testing them, and the best specifications for constructing roads with the several materials; street plans of cities and towns; width and grades of streets; curbs and gutters; construction of various kinds of street pavements; storm drainage systems for cities; and construction of sidewalks. *Five hours, first term.*

108. Road materials laboratory: The study and testing of various materials used in the construction of roads and pavements. The purpose of the course is to give the student an opportunity of becoming familiar with the physical properties, relative merits, and methods of testing the various materials. *Four hours, second term.*

109. Road and street improvement: A practical field and office course in making surveys, plans, and estimates for road and street improvements. *Six hours, third term.*

111. Graphic Statics: A course of lectures and drafting room exercises covering fundamental principles of equilibrium; composition and resolution of forces; the equilibrium polygon; graphical determination of stresses in trusses and framed structures, bending moment and shear in beams; center of gravity of given sections; moment of inertia. *Lectures two hours, drafting three hours, third term.*

112. Structural drafting: The purpose of this course is to acquaint the student with the details of structural steel work, to train him in the neat and accurate execution of drawings, and to teach him in a practical way to solve some of the simpler problems in structural mechanics. *Six hours, first and second terms.*

SENIOR CLASS.

113. Theory of structures: The purpose of this course is to teach the fundamental theories underlying the design of bridges, roofs, and other framed structures of metal and timber. The discussions cover determination of outer and inner forces acting on the structure; concentrated live load systems; design of beams, plate girders, simple trusses, bridge trusses with secondary web systems, lateral and portal bracing, transverse

bents, viaduct towers, cantilever bridges, three-hinged arches. *Five hours, first term.*

114. Structural design: This is a drafting room course in the practice of bridge and structural design, and is the complement of course 113. Complete designs are worked out for a number of structures. *Nine hours, first and third terms.*

115. Railroad engineering: The discussions cover the inception, promotion, and organization of railroad projects, organization and construction; the duties of the engineer; alignment and grades; rails and rail fastenings; cross ties; ballast and roadbed; culverts; bridges, and minor structures; turnouts; sidetracks and yards; terminals; elevation of outer rail; signalling; the locomotive and its work; the locomotive and grade problems; railroad expenditures; relation of operating expenses to number of trains; effect of rise and fall, distance, and curvature to train mile costs; railroad location, construction, and betterment surveys. *Three hours, first term.*

116. Theoretical hydraulics: The discussions cover fluid pressures; equilibrium of floating bodies; fundamental principles of hydro-mechanics; methods of measuring the flow of water; Pitot tube; Venturi meter; orifices; tubes; sluices; weirs; nozzles; fire hose; flow in open channels, sewers, conduits, etc.; flow in pipes; dynamic action of flowing water; impulse wheels; turbines of various types; centrifugal pumps. *Five hours, second term.*

117. Practical hydraulics: This course is the complement of course 116, and its purpose is to bring the student into close touch with practical hydraulics. The work includes the determination of coefficients of orifices, tubes, and nozzles, determining loss of head in pipes and fire hose; measurement of water by weirs and meters; testing meters and pumps; gauging streams with current meter; visits of inspection to hydro-electric power plants under construction and in operation and reports on same. *Three hours, third term.*

118. Concrete and masonry construction: Discussions cover mathematical theories underlying the design of reinforced concrete beams, columns, slabs and arches; cements, limes and mortars; methods of mixing and placing plain and reinforced concrete; classification and properties of building stones; definition and construction of various classes of stone masonry; manufacture of brick; brick work; stone and brick arches; retaining walls; piers and abutments; shallow foundations; coffer dams; crib foundations; pile foundations; pneumatic caissons; the freezing process; cylinder piers. *Three hours, second and third terms.*

119. Sanitary engineering: The discussions cover the history of sanitary science; sanitary measures necessary for the

prevention of zymotic diseases; the engineer's part in the campaign for the prevention of disease; the sources of water supply; its collection, purification, and distribution; sewerage, and sewerage design; sewage disposal; construction of sewers; pumping of sewage; sewage treatment plant; sewage farms; collection and disposal of garbage and rubbish; street cleaning. *Five hours, third term.*

120. Thesis: Each candidate for a degree in civil engineering is required to prepare a thesis upon some engineering subject which he may select. It must be the record of original investigation of some engineering subject or an original design of some engineering structure or project. The applicant for a degree shall file a written announcement of his subject with the professor of civil engineering not later than October 1st of his senior year; and the thesis shall be completed and submitted for approval not later than May 1st. During the first term the candidate shall devote not less than four hours a week to reading and collecting data for his thesis; during the second term he shall devote not less than nine hours a week and during the third term until May 1st, not less than three hours a week to work on the thesis. He shall submit on Monday morning of each week a written statement of the time he has devoted to thesis work during the preceding week.

The student is also required to prepare and hand in one report or paper during first term and one during second term on subject of thesis or some allied subject approved by the professor.

SUMMER CAMP AND SCHOOL OF SURVEYING.

105. Practical work in plane and higher surveying supplementing the instruction given in courses 102 and 103: This work is given at the summer camp immediately after commencement, between freshman and sophomore years. The purpose of this course is to give the student uninterrupted practice in the solution of practical problems in surveying similar to those which he will meet early in his career as an engineer; and the course is in line with the policy of the institute to combine theory and practice in all its branches of technical instruction. Students in this course are required to make notes of all the work done by the party to which he is assigned and to compute and plot all surveys made by his party. The parties will be made as small as the conditions to the work will permit so as to give each student the greatest possible amount of practice with the instruments. This course is required of all students who are candidates for graduation in civil, or mining engineering, and requires *forty-eight hours per week for four weeks.*

110. Practical work in railway, highway, and hydrographic surveying: This course is also given in the summer camp, and

is required of all students who are candidates for graduation in civil or mining engineering, and will be taken between sophomore and junior years. The work includes the preliminary location and construction, surveys for a short line railroad, (about 2 miles), with maps, profiles, and estimates for same; all surveys, maps, profiles and estimates for a short line of highway, (about 2 miles); surveys for a dam and lake formed thereby; also gauging of stream flow with current meter. The time required for this course is *four weeks, forty-eight hours per week*.

The Institute furnishes tents, cots, camp stools, and all equipment of mess tents. The student will furnish his own bedding, soap and towels. A charge of \$18.00, payable in advance, will be made for each course and will be applied to payment of the expense of the camp.

GRADUATE STUDENTS.

121. Graduate engineering course: This course requires three hours a week to be devoted to recitations and five hours a week to practical work in field or drafting room, throughout the session. The subjects may be varied to fit the needs of the students taking the course, but will be chosen from the following: Reinforced concrete; bridge design; sewerage and water supply; specifications and contracts.

122. Thesis: Graduate students applying for the degree of civil engineer will be required to prepare and present a thesis, the regulations governing thesis work being the same as those prescribed for seniors.

ELECTRICAL ENGINEERING.

PROFESSOR DUNSTAN.

PROFESSOR HILL.

ASSISTANT PROFESSOR WOOTEN.

INSTRUCTOR SPANN.

JUNIOR CLASS.

201. Elementary theory of electricity and magnetism: A detailed study of the fundamental phenomena and laws of the subject. *Three hours, first term.*

202. Direct current machinery: Lectures and recitations on the principles of design, construction, installation, and operation of direct current generators and motors. This course treats in detail of the selection of machinery for given conditions, performance guarantees, acceptance tests for heating, regulation, efficiencies, etc., parallel running troubles and remedies and repairs. A large number of carefully selected problems are assigned for solution and every effort is made to have

the course cover not only the fundamental principles but also the broader engineering problems connected with the choice and use of this class of machinery. *Three hours, second term.*

203. Central station appliances and distribution for lighting and power service by direct currents: This course treats in detail of switch boards and appliances, calculation of circuits of various kinds, arc and incandescent lighting, metering, systems of charging for service, economics of generating plants. *Three hours, third term.*

204. Elementary theory of electricity and magnetism: For non-electrical engineering students. This course is similar to course 201, though not so detailed in treatment. *Two hours, first and second terms.*

204a. The construction and operation of both direct and alternating current machines; tests for efficiency, regulation and heating; the generation and distribution of electric power. In this course, it is intended to cover the application of electricity to the operation of machinery. For non-electrical students. *Two hours, third term.*

205. Electrical measurements and tests: For students in electrical engineering and mechanical engineering. The course consists of lectures and recitations upon the measurements of current, voltage, resistance, capacities, magnetic measurements, stray power, brake tests, heat runs, and related subjects. *One hour, entire session.*

206. Laboratory work: For students in electrical engineering and mechanical engineering. The course consists of galvanometer work, resistance measurements of various kinds, magnetic measurements and various tests. *Four hours, first term.*

207. Laboratory work: For students in electrical engineering and mechanical engineering. The second term is devoted to the operation of direct current motors and dynamos, characteristics of direct current machinery, methods of adjusting, compounding, etc. *Four hours, second term.*

208. Laboratory work: For students in electrical engineering and mechanical engineering. Efficiency tests, location of troubles on machine and line, switch boards and appliances and general experience in the operation of a direct current station, are given. *Four hours, third term.*

SENIOR CLASS.

210. Theory of alternating currents: Lectures, recitations and problems upon the phenomena of alternating current circuits, inductances, etc. The course is introductory to the subject of alternating current machinery, and in order to take it, students must have a fair working knowledge of differential

and integral calculus and vector algebra. *Five hours, first term.*

211. Alternating current machinery: Lectures and recitations upon alternating current generators, calculation of alternator voltage, regulation by various methods, parallel running, transformers, induction motors, single phase commutator motors, synchronous motors, rotaries, etc.; harmonic analysis of wave forms, the expression of the same in Fourier series and calculation of the current produced in various circuits.

The course is somewhat advanced and in order to take it satisfactorily students must have a good knowledge of the mathematical theory of alternating currents. *Five hours, second term.*

212. Transmission lines: Lectures and recitations upon line inductance and capacity, the application of hyperbolic functions to the calculation of the regulation of long transmission lines, effect of harmonics in E. M. F. waves, surges, etc. Stresses in conductors, line construction and related topics. *Five hours, third term.*

213. Laboratory work: Operation of alternating current machinery, determination of data for calculation of alternator regulation, direct determination of regulation, efficiency tests, transformer connections, transformer testing for efficiency and regulation, induction motor testing, circle diagram. Brake tests, single phase induction motors, synchronous motors, V-curves, rotaries, synchronizing, etc. The work during the third term consists chiefly in the determination of data for the student's thesis. *Four hours, entire session.*

214. Electric railway engineering: A detailed study of the subject of street and interurban electric railway service covering train resistance, grades, curves, line and track, car and power plant equipment, both direct and alternating currents, sub-station, single phase equipment, and related topics.

The course consists of recitations and lectures with constant reference to current numbers of various technical journals. *Two hours per week, one term.*

215. Telephone engineering: History and development of telephone types, designs of telephone parts, sub-station equipment, magneto and common battery switch boards, exchange equipment, telephone power plants, over head and under ground circuits, protectors, coin collectors and meters, party lines, private branch exchanges, first and intercommunicating systems, trunking, and toll boards. *Two hours, first and second terms.*

216. Telephone laboratory: Details of telephone constructions, association of parts, assembly of switch board parts, storage batteries, tests for location of faults in cables and lines, capacity and insulation tests, details of common battery and

magneto switch boards, trunking schemes, etc. *Two hours, first and second terms.*

217. Electrical engineering: For senior mechanical engineering students. Direct current motors and generators, street railways, circuits, alternating currents, and alternating current machinery. This course is less detailed than the courses for electrical engineering students, but aims to cover the field in a more generalized manner. *Three hours, first term.*

218. Laboratory work: For seniors in mechanical engineering. This course is given in connection with course 217, and gives practice in the operation and testing of electrical machinery of various kinds. *Four hours, first term.*

219. Contracts and specifications: For seniors in the courses of electrical engineering and mechanical engineering. Lectures and recitations upon engineering specifications and the elements of the laws of contracts. Considerable time is devoted to exercises in writing specifications covering machinery and engineering projects. These specifications are read to the class and the students are required to offer criticism on each set. *Two hours, third term.*

220. Power plant: For students taking the special course in applied electricity. The purpose is to familiarize the student with the operation of engines, pumps, generators, motors, switchboard appliances and boilers. All students in this course are expected to work under the power house engineer. *Four hours, entire session.*

WIRELESS TELEGRAPHY.

LABORATORY ASSISTANT KOMP.

221. In response to a considerable demand it has been decided to offer a special course in wireless telegraphy. The practice work in this subject will be under the charge of a licensed wireless operator. Every effort will be made to offer to students opportunities to become familiar with the setting up, installation, and testing of wireless apparatus, as well as becoming expert in sending and receiving.

The requirements for entrance to this course will be similar to those for entrance upon the two-year course in applied electricity.

Wireless messages are constantly being picked up with the wireless station, these messages coming from ships at sea, and from various wireless stations along the Atlantic Coast.

The course of study is the same as that of the first year in the two-year course in applied electricity, with the exception that four hours of wireless telegraph study and practice will be substituted for four hours power house work.

MECHANICAL ENGINEERING.

PROFESSOR WILMORE.

ASSISTANT PROFESSOR HIXON.

INSTRUCTOR STOKES.

INSTRUCTOR ASKEW.

ASSISTANT DAVIS.

LABORATORY ASSISTANT ROBERTS.

LABORATORY ASSISTANT RUSSELL.

The following courses are offered in this department:

FRESHMAN CLASS.

Students who have credit for a course satisfactorily completed in an accredited high school will be assigned to other work.

351. Shop work—carpentry: The lessons include instruction in the nature and use of tools; instruction and practice in shop drawing; elementary work with the plane, saw, chisel; the construction of different kinds of joints, timber splices, cross joints, mortise and tenon, mitre and frame work, and dove tail work, comprising the different joints used in cabinet work, and examples of framing roof trusses. Students who have had previous experience in the use of tools or who show special proficiency, are given work of an advanced character. *Six hours, one term.*

352. Shop work—Wood turning: The instruction includes the nature and use of the lathe and tools, and lessons comprise plain, straight turning, caliper work to different diameters and lengths, simple and compound curves, screw plates and chuck work, hollow and spherical turning. *Six hours, one term.*

353. Shop work—pattern making: The course includes work in whole and split patterns in wood for solid and cored castings, and core boxes for producing the necessary cores. The characteristics of the different kinds of timber used for patterns are studied, and attention is called to allowances necessary for shrinkage and draft. The patterns are intended to be used by the students in their subsequent work in the foundry. *Six hours, one term.*

SOPHOMORE CLASS.

312. Applied mechanics: Required of students in engineering courses. The fundamental laws of mechanical science are studied while special attention is given to the practical application of these principles to engineering work. *Three hours, second and third terms.*

361. Shop work—forging: A text-book is used from which is learned something of the characteristics of the metals and the best methods of working them. The lessons are so arranged as to make the student familiar with the handling of the tools and the successive steps in working metals by hand. Exercises in drawing, upsetting and bending, cutting, punching, and welding by various methods, are given, together with a course in steel forging, including hardening, tempering, and case hardening. *Four hours, first term.*

362. Shop work—foundry: Required of all students except those taking agriculture. The work for the most part consists of small articles, such as light machine parts and stock pieces used for the exercise work in the machine shop. A sufficient variety is introduced for the student to acquire a good general knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand and two part flasks, but some core work and more complicated work is introduced to illustrate the processes, as well as to furnish the castings for the advanced work in the machine shop. Instruction is given in operating the cupola, and from time to time lectures and recitations are held on the metallurgy of the metals used in the industrial arts. *Four hours, second term, and five hours third term.*

JUNIOR CLASS.

321. Practical mechanics: Required of students who take machine shop work. The instruction consists of recitations and lectures on general machine shop work. The construction, use, and limitations of the various machine tools, the forms of cutting tools and methods of grinding them, and the form and use of jigs and gauges, are studied, together with instruction in machine management, and time and cost keeping. *One hour, entire session.*

322. Strength of materials: Required of students in the engineering courses. The properties and characteristics of the materials of engineering construction are studied, and the development of the methods of calculating their strength under different conditions of stress is explained. Many problems involving the strength of beams, girders, columns, and shafts are worked out. *Three hours, second and third terms.*

323. Engines and boilers: Required of juniors in civil engineering and of the first year students in the course in applied electricity. An elementary descriptive course in which attention is called to the different types of engines and boilers, and methods of setting, valve gears and valve setting, piping systems and auxiliary apparatus for power plants. *Three hours, first term.*

324. Gas engines: Required of seniors in chemical engi-

neering, juniors in civil engineering, and the first year students in the two-year course in applied electricity. A descriptive course in gas, gasoline and oil engines; different types, different cycles, carburetion, ignition, troubles and remedies. *Three hours, second term.*

325. Transmission of power: Required of juniors in civil engineering, and of the first year students in the two-year course in applied electricity. Shafting, pulleys, bearings, belting, gearing, aligning of shafting, calculation of pulley and gear sizes, power of belts, lubrication and lubricating systems. *Three hours, third term.*

371. Shop work: Required of students in the courses of mechanical engineering and electrical engineering. This work is divided into two parts:

(a) A course of chipping and filing. The lessons comprise work on cast iron and wrought iron, and consist in chipping to line on flat and curved surfaces, key seating, filing and finishing to line, surface filing, slotting, pin and screw filing, and surface finishing with scraper.

(b) A course in machine work: The materials worked on include cast iron, wrought iron, steel and brass. Exercises are given in turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling in the lathe and drill press, reaming, boring, screw cutting in lathe and with taps and dies. Practice is given in working the planer, shaper, and milling machine. In the last part of the year, some work in tool making is given, such as making taps, reamers, and milling cutters. Some sort of construction or repair work for the department is always on the shop floor and students who are well advanced in this work have opportunity to gain additional practice and experience by assisting with this. *Six hours, entire session.*

374. Shop work: Required of students in the course of mining engineering and elective for juniors in the course of civil engineering. The work includes courses (a) and (b) as described in course 371 just preceding, except the amount of work required is less in proportion to the time consumed.

All shop work is done from blue prints and blackboard sketches. For the preliminary exercise work, special instruction sheets are prepared and given out to each student with the stock for the exercises. These sheets explain in detail each step in the process of producing the exercise, and are intended to supplement the individual instruction of the instructor. In the construction work it is the purpose to select some simple machine and build two or more of them on the interchangeable system. Jigs and templates are built to accomplish this result as far as possible. A system of time keeping is in force in the

shop. At the end of the week each student makes out his time card, describing the work he has done during the week, and giving the number of hours spent on each job. *Four hours, entire session.*

377. Laboratory: Required of juniors in the courses of mechanical engineering and electrical engineering. The work will consist in the adjustment and calibration of instruments used in engineering work, and the adjustment and operation of gas, gasoline and steam engines. Tests will be made to determine the efficiency of mechanisms, such as hoists, jack screws, gearing, belts and other transmission devices, together with some work in valve setting and power measurements of steam engine. Complete and accurate written reports of each experiment are required. *Two hours, third term.*

378. Laboratory: Required of second year students in the two-year course in applied electricity. The work will consist of the calibration of instruments, indicator work, valve setting, fuel and furnace gas analysis, and lubricant testing. *Three hours, second term.*

SENIOR CLASS.

331. Power plant engineering: Required of students in the courses of mechanical engineering and electrical engineering. The work of the course consists of a study of the practical applications of steam machinery. It is believed that a thorough knowledge of the apparatus in actual practical use is the best preparation a student can have for the study of the theory, and to that end, the different types of engines, boilers, pumps, condensers, and other auxiliary apparatus are taken up and studied in detail, and the advantages of each are discussed. Extensive files of manufacturers' catalogues are kept, and the technical papers and magazines in the library are freely used in order to keep in touch with the latest and best practice in engineering work. *Five hours, second half year.*

332. Thermodynamics: Required of students in the courses of mechanical engineering and electrical engineering. The subject is first studied from the ideal standpoint, and later the applications are made to hot air engines, gas and gasoline engines, and steam engines, and also to air compressors and refrigerating machines. The temperature-entropy method of analysis is used in explaining heat transfers, and in general, graphical methods are used in preference to analytical ones when they can be made to serve the purpose equally well. In this course will be given instruction in indicator practice and the interpretation and working up of indicator diagrams from steam engines, gas engines, air compressors, and refrigerating machines. *Five hours, first half year.*

334. Heating and ventilating: The different methods of

heating and ventilating buildings are treated. A study is made of the relative efficiency of hot water, steam and warm air as mediums for heating different kinds of buildings, and special attention is given to the design and operations of healthful heating systems for residences. *Two hours, first term.*

336. Refrigeration: Required of students in the course in mechanical engineering. The theory of the refrigeration process is studied together with its applications to commercial plants. The advantages of the various mediums, as ammonia, carbon dioxide and others are discussed, as well as methods of insulation and plant arrangement. *Two hours, second and third terms.*

381. Laboratory: Required of students in mechanical engineering and electrical engineering. This work includes fuel analysis and heat determination, flue gas analysis and the study of combustion, oil and lubricant testing, and valve setting and indicator analysis. *Four hours, first term*

382. Laboratory: Required of students in mechanical engineering and civil engineering and optional in electrical engineering. The course includes work in testing the strength of materials, as iron, steel, wood, and cement in tension, compression, and transverse loading, and the calibration of weirs, nozzles, and meters, a study of the flow of water in pipes, and the testing of hydraulic motors and pumps. *Four hours, second term*

383. Laboratory: Required of students in mechanical engineering and electrical engineering. The work includes tests of engines, boilers, pumps, gas and gasoline engines, complete power plants, and when opportunity offers, tests of commercial power plants. *Two hours, third term.*

384. Thesis: Each applicant for a degree is required to prepare and hand in a thesis. This thesis may consist of a design, a study of some engineering problem involving a series of tests, or a study involving the collection and analysis of data and material on some engineering subject with a statement of definite conclusions derived therefrom. Preliminary work shall begin with the first term and weekly reports of progress made. The thesis proper shall be handed in to the professor in charge not later than May 1st. The student shall prepare and hand in two papers or reports on some portion of his thesis or some allied subject, approved by the professor, one during the first term and one during the second term. Credit as laboratory work. *Two hours, first and second terms, four hours, third term.*

GRADUATE STUDENTS.

391. Laboratory: This course is arranged to suit the work

being carried by the students, and the hours are adjusted to suit their available time.

341. Steam turbines: The theory, design and structural details of the different types of modern steam turbines are studied, and complete designs are worked out. *Three hours, first term.*

342. Power plant design and economics: The economics of power plant design, the relation of the different elements of a power plant to each other, and the conditions of maximum efficiency are studied. Plants are designed to give the highest efficiency under specified conditions, and actual plants are studied to discover, if possible, sources of additional economy in operation. *Three hours, third term.*

343. Works management: Methods of cost keeping, systems of organizing and paying labor, depreciation of plant, accounting and business organization are studied. Many problems are solved, including the layout of buildings and machinery for manufacturing plants. *Three hours, third term.*

SPECIAL STUDENTS.

Special students who have the necessary preparation may be admitted to any of the classes in this department. For the benefit of students who, for any reason, are not able to remain in college to complete the full course, but who wish some training in drawing and shop practice, a special two-year course has been arranged. This course is particularly recommended to young men who contemplate entering the mechanical trades either preceding or following the apprenticeship period. In many cases this work has been accepted as equivalent to a part of the apprenticeship period and the time of the latter shortened thereby. The drawing and mathematics are invaluable tools in any of the trades, and work in the different shops enables the apprentice to become familiar with the principles of the trades allied to his own.

MINING ENGINEERING AND GEOLOGY.

PROFESSOR BROWN.

ASSISTANT GILMOUR.

JUNIOR CLASS.

401. Mine surveying: All general surveying as given by the civil engineering department previous to the junior year is required for this course. The work covers general surveying methods as applied to conditions prevailing at mining properties, both underground and at the surface. The student is required to work out practical problems that he will be likely to meet in actual practice. *Five hours, first half of first term.*

Text-book: Durham's Mine Surveying.

402. Coal mining: For those who have taken course 401 and its prerequisites. This course includes the following:

Examination of coal properties; drifts, slopes and shafts; methods of working; plans of mines; coal-cutting machinery; trackwork; haulage; mine ventilation; coal washing; coking in beehive ovens; by-product coking. *Five hours from first mid-term to end of session.*

403. Junior drafting: The course includes free-hand lettering, mapping, detailed drawings to scale of various structures relating to mines, design of mine cars, design of ventilating fans. *Five hours, entire session.*

404. Summer course: The time will be divided between a study of gold mining and milling at Alexander city; coal mining, washing, and coking at Birmingham, and iron ore mining at Birmingham. Surveys and reports will be required. *Four weeks, immediately following commencement, between junior and senior years.*

SENIOR CLASS.

411. Mining: Modes of occurrence and origin of the various ores and economically valuable mineral deposits. Prospecting and examination of mineral properties, including boring by different methods. Methods of opening up mineral deposits, breaking ground, supporting excavations, developing and working coal and metalliferous deposits, haulage, hoisting, drainage, ventilation, lighting and provisions for ascent and descent. The last term is devoted to the design of mine structures such as head frames (timber and steel), coal tipples, mine buildings. *Three hours, entire session.*

412. Drafting: Map work consisting of the plotting of notes taken on summer trip between junior and senior years; drafting accompanying design of mine structures; original work in connection with thesis. *Four hours, entire session.*

413. Laboratory course: For seniors in mining engineering and chemistry and metallurgy. The work includes crushing, sampling, concentration, stampmilling, amalgamation and cyaniding. *Three hours, entire session.*

Text-books: Coal and Metal Miner's Pocket Book, and International Text Books.

421. Graduate course: This course is offered to those who desire to pursue the subjects related to mining beyond the scope to which the two years' course limits them. The work will be arranged to meet the requirements of those desiring to take it.

GEOLOGY.

JUNIOR CLASS.

431. Crystallography: For students in the courses in civil engineering, mining engineering, and chemistry and metallur-

gy. A thorough study is made of the crystal systems with the aid of a full set of crystal models and natural crystals. Special emphasis is laid upon the more practical features which will be of service in further mineralogical work. *Four hours, first mid-term.*

Text-book: Bayley's Elementary Crystallography.

432. Mineralogy: For juniors in the courses of civil engineering, mining engineering, and chemistry and metallurgy. The course consists of a thorough study of a large number of minerals from the standpoint of their physical characteristics. A good type collection of minerals is kept in the laboratory for comparison. An effort is made to have the student become familiar with economically important ores and non-metallic minerals, and the common rock-forming minerals so that he can identify them at sight by the application of a few simple tests. *Four hours, one and one-half terms.*

Text-book: Butler's Handbook of Minerals.

433. Lithology: For those who have satisfactorily completed course 432. This deals with the combinations of minerals in the make-up of rocks, and aims to bring out structure, texture, crystallization and mineralogical composition sufficiently to enable the student to recognize the commoner rocks in the sedimentary, igneous and amorphous classes. *Four hours, third term.*

Text-book: Kemp's Handbook of Rocks.

434. Agricultural geology: For juniors in agriculture. This course deals with the structure, composition and other characteristics of the different classes of rocks; the general principles involved in rock-weathering; special cases of rock-weathering; transportation and redeposition of rock debris; classification and character of resulting soils. *Two hours, second and third terms.*

Text-books: Merrill's Rocks, Rock-Weathering and Soils.

435. General geology: See course 441.

436. Engineering geology: The rock forming minerals; the general characters, mode of occurrence and origin of rocks; structural features and metamorphism of rocks; rock-weathering; surface waters; underground waters; landslides and their effects; wave action and shore currents; lakes, their origin, and relation to engineering work; glacial deposits, their origin, structure and economic bearing; building stone; limes, cement and plaster; clay and clay products; coals; petroleum, natural gas and other hydrocarbons; road foundations and road materials; ore deposits. Required of juniors in architectural engineering, special students in mining engineering, and elective for seniors in civil engineering. *Two hours, entire session.*

SENIOR CLASS.

441. General geology: For juniors in the course of mining engineering, and chemistry and metallurgy, and for seniors in the courses of civil engineering and general course. The course covers dynamic geology, structural geology, geomorphology, and historical geology in the order named. The lectures and recitations are supplemented by laboratory instruction and geological excursions. *Two hours, entire session.*

Text-book: Chamberlain and Salisbury's College Geology.

442. Economic geology, non-metallic minerals: For seniors in the courses in mining engineering, and chemistry and metallurgy. The course is presented by lectures and recitations and includes the study of modes of occurrence, distribution, origin and uses of coal, petroleum, limestone, salines, gypsums, fertilizers, abrasives, minor non-metallic minerals and mineral waters. *Two hours, first term.*

Text-book: Reiss' Economic Geology of the United States. (Revised.)

443. Economic geology, metallic minerals: For students who have taken course 442. The work includes a study of the ores of iron, copper, lead, zinc, gold, silver, silver-lead, aluminum, manganese, mercury, and the minor metals. *Two hours, third term.*

Text-book: Reiss' Economic Geology of the United States. (Revised.)

444. Methods of teaching physical geography: Especially adapted to the secondary schools of the State. In the course in general geology will be found much that is especially applicable to physical geography. It takes up a study of subterranean and surface agencies both as to their destructive and constructive processes. The results of these processes are then taken up in a study of the topography of the surface of the earth and under the following heads: The geographic cycle; land sculpture; topography as determined by faults and joints; adjustment of rivers; sea coasts; mountain ranges. Students desiring extra work in this subject may arrange for a three-hour course. *Two hours a week, first and second terms.*

ARCHITECTURE.

PROFESSOR BIGGIN.

ASSISTANT LEEK.

The department of architecture was established in June, 1907. The aim of this department is to give the best training possible within the time limits of a college course; only a part, however, of the architect's training can be acquired within

college walls, and it is recognized that this must be supplemented by experience in the offices of practicing architects.

Four-year courses are offered in architecture and architectural engineering, both leading to the degree of Bachelor of Science. The freshman and sophomore years of these courses are respectively alike, affording the student ample opportunity for investigation before making a choice. The schedules conform to the "standard minima" of the Association of Collegiate Schools of Architecture. A two-year special course in architecture is offered for the benefit of mature draftsmen, and a certificate given on completion.

The first requirement in architecture is the ability to design, from the artistic side, that the structure may please the eye, and from the practical one, that it may suit its purpose. Next in importance are the engineering studies necessary for proper construction. Finally the student must acquire the fundamentals of that broad cultural training everywhere recognized as indispensable to an architect's success.

Architectural design is taught on the basis of problems requiring a month or more for solution, and developed by the student under constant personal criticism. These are accompanied by short sketch problems to promote quickness of thought and execution, with no criticism until after they are turned in for judgment. Freehand drawing in some form runs throughout the entire course in architecture. History of architecture is taught by lantern lectures, accompanied by library research work and sketching; for students in architecture this is followed by historic ornament and short courses in the history of painting and sculpture.

A general course is given in building construction and superintendence, with the preparation of working drawings, details, specifications and contracts. This is supplemented by special work in the various engineering departments of the college, along such lines as heating and ventilation, wiring and illumination, reinforced concrete and steel frame construction. Of foreign languages, French is the most useful to the architect.

Students who at the close of the sophomore year elect architectural engineering, devote less of the remaining period than those in architecture to the subjects of design and history. They are also not required to take water color painting, advanced freehand drawing, clay modeling or a foreign language. The time thus saved is occupied in engineering studies and advanced construction.

During the summer months all students in the department are required to spend one month or more in the offices of practicing architects, or follow a prescribed course in library

research work and sketching; examinations are held on this in the Fall and college credit given.

The following courses are offered in this department:

FRESHMAN CLASS.

11. Freehand drawing: Work in pencil and wash from casts of architectural ornament, architectural fragments and parts of the figure. Out-of-door sketching. *Four hours, entire session.*

15. Shades and shadows: Delineation of architectural shades and shadows. This course must follow or be accompanied by descriptive geometry. *Two hours, first term.*

17. Perspective: Theory and practice of architectural perspective, and methods of rendering. This course must follow or be accompanied by descriptive geometry. *Two hours, second term.*

19. Elements of architecture: The classic orders of architecture and elementary studies in composition, with drawings rendered in India ink. This course must follow or be accompanied by descriptive geometry. *One hour lecture, and six hours drafting, entire session.*

SOPHOMORE CLASS.

21. History of architecture: Origin and development of historical styles of architecture from the earliest times to the fall of the Roman Empire; the Moslem irruption; Romanesque and Gothic architecture. Typical examples are studied in detail and for this purpose the lantern is in constant use. Stress is laid on the evolution of a style from changes in structural forms, political and religious conditions and national character. Prerequisite course: Ancient and medieval history; students who have not offered this for entrance must take it in the freshman class. *One hour lecture and two hours library research and sketching, entire session.*

25. Charcoal drawing: Work in charcoal and wash from casts of architectural subjects, antique sculpture and from life. Out-of-door sketching. Prerequisite course: Arch. 11, or its equivalent. *Six hours entire session.*

29. Architectural design: A study of architectural composition; problems in design, composition, planning, motives, details and rendering. Prerequisite course: Arch. 19, or its equivalent. *One hour lecture, nine hours library and research and drafting, entire session.*

JUNIOR CLASS.

31. History of architecture: Continuation of the technical and historical study of architecture; the Renaissance and modern times. During the third term particular attention is given to architectural development in the United States. Pre-

requisite course : Arch. 21. *One hour lecture and two hours library research and sketching.*

33. Building construction: Building materials and construction; foundations, footing and walls; stones and stone cutting; stone and brick masonry; concrete; terra cotta; iron and steel supports; fire resisting construction; plastering; water supply; plumbing and drainage. Working drawings and details. Specifications, contracts and superintendence. *Two hours lectures and two hours drafting, entire session.*

35. Pen and ink rendering: Given with special reference to the rendering of architectural subjects. Prerequisite course: Arch. 11 or its equivalent. *Four hours, first and third terms.*

37. Water color painting: Work from models and still life. Conventional and sketch rendering of architectural subjects. Out-of-door sketching. Prerequisite course: Arch. 25. *Six hours, entire session.*

39. Architectural design: Continuation of problems in design, composition and planning. The planning of domestic buildings. Prerequisite course: Arch. 29. *Twelve hours library research and drafting, entire session.*

SENIOR CLASS.

41. Historic ornament: An analysis and study in detail of the main historic styles of decoration, with a brief outline study of the development of mosaic, ceramics, stained glass, ornamental metal work, textile fabrics, furniture and other minor arts. Prerequisite, except for special students: Arch. 31. *One hour lecture and two hours library research and sketching.*

42. History of painting: A brief survey of the development of painting, with special reference to mural work. *One hour lecture and two hours library research sketching.*

43. History of sculpture: An outline study of the development of sculpture and its relation to architectural design. *One hour lecture and two hours library research and sketching.*

45. Building construction: Continuation of building materials and construction; carpenter work; properties and uses of various woods; methods of framing; slow-burning and mill construction; exterior and interior finish; sheet metal work; elevators; painting and glazing; hardware. Working drawings and details. Specifications, estimates and superintendence. Relations between owner, contractor and architect. *Two hours lectures and two hours drafting, entire session.*

47. Advanced freehand drawing: Figure work from life, in color or black and white. Out-of-door sketching. Prerequisite course, except for special students: Arch. 37. *Six hours, first and second terms.*

48. Clay modeling: Work from architectural casts and from sketches. Prerequisite courses: Arch 41 and 47. *Six hours, third term.*

49. Architectural design: Continuation of problems in design, composition and planning. During the third term a single major problem is studied and worked up in detail as a thesis. Prerequisite course, except for special students: Arch. 39. *Eighteen hours library research and drafting, entire session.*

MACHINE DESIGN AND MECHANICAL DRAWING.

PROFESSOR FULLAN.
ASSISTANT PROFESSOR THOMAS.
ASSISTANT LAMPROS.
ASSISTANT GATCHELL.

The following courses are offered in this department:

FRESHMAN CLASS.

601. Mechanical drawing: This course in drawing is of general educational value, and is required of students in all courses. The object of the course is to train the mind through the eye and hand with the applications of geometry to drawing. Accuracy, neatness, and the correct use and the care of instruments, are given special attention.

The work is given in the following order:

- (1) Freehand drawing and freehand lettering.
- (2) Linear drawing—geometrical construction.
- (3) Orthographic projection, sections and intersections.
- (4) Development of surfaces and the construction of models.
- (5) Isometric, Cavalier, and dimetric projections.
- (6) Study of working drawings, making tracings and blue prints.

(7) During the third term, in lieu of (5) above, a course in agricultural drafting is given freshman students in agriculture, and is arranged for the purpose of assisting them to a knowledge of the principles of mechanical drawing and their application to the farm. The course consists of drawings in the following lines of work:

(a) Farm maps: topographical drawing; topographical conventions; maps and plots; layout for farm buildings, out-houses and grounds.

(b) Building construction: Plan, elevation, and section; details, framing joints; building materials; layout of plumbing and water supply on the farm; plans for barns, hayracks and roof construction; and framing for houses, etc.

(c) Concrete forms: Simple forms; steps and stair forms;

wall forms; layout of forms for silo building; watering troughs and fence posts.

Freehand drawing of geometrical subjects is given early in the course. It provides training of a certain definite nature by developing close observation and accuracy in representing the forms of models used in the work. Freehand lettering of standard practice is strongly emphasized throughout the entire course. The construction and application of Roman and Gothic capitals and small letters to working drawings and the arrangement and design of formal titles are treated in this division.

Under the head of linear drawing, special attention is given to the proper use and care of instruments. The most useful of the geometrical constructions are worked out in pencil and afterwards carefully inked.

Orthographic projection with sections and intersections is given in the beginning of the second term, and is a prerequisite to course 602 in descriptive geometry. Developments of surfaces are made, and paper models of the objects are constructed from these developments. The construction of these models has the property of more firmly fixing the principles involved in the preceding division in the mind of the student and is given special attention.

In the third term pictorial representations of objects are given by means of single-view projections, isometric, cavalier, and dimetric. The paper models made by the pupil are now used for subjects. A number of working drawings of familiar objects are required in the last part of the year. Penciled drawings to scale, tracings and blue prints of these objects are made by each member of the class. *Five hours, entire session.*

SOPHOMORE CLASS.

602. Descriptive geometry: Required of all students preparing for engineering and architectural courses. The work is given by lectures, written recitations and drafting room instruction. In this course, theory and practice are combined with the purpose of training the student in the graphical expression of ideas. The instruction includes problems relating to the point, straight line, and plane; tangents and normals; to cylindrical, conical, and warped surfaces, to sections, intersections, and developments; to shades, shadows, and perspective; and is intended to develop in the mind of the student a clear concept of magnitudes in space. The lectures and written recitations are to impart principles and to permit the instructor to meet the entire class, and, with diagrams and models, supplement the work of the text. The drawings, two hours per week, consists of plates of problems, which are selected from the text-book and other sources. *Four hours, entire session.*

JUNIOR CLASS.

604. Kinematics of machinery: Required in the courses of mechanical engineering and electrical engineering. Under this head machines are analyzed and their elementary combinations of mechanism are studied. Motions and velocities, instantaneous centers, kinematic chains, velocity diagrams, parallel and straight line motion mechanisms, are given early in this course. The communication by means of gear wheels, belts, cams, screws, and link work, and the different ways of obtaining definite velocity ratios and definite changes of velocities in machine parts are investigated. Problems designing quick motions, trains of mechanisms for various purposes, and gear trains are treated. Illustrated lectures with the lantern, showing practical applications of mechanism to the design of machinery, are given at intervals throughout the course. *Three hours, first term.*

605. Graphic statics of mechanism: Required in course of mechanical engineering. The lectures provide a brief course in graphic statics, graphical statics of mechanism, and in the design of structures, including roof trusses for factory buildings, crane frames, girders, and water-tank towers. The stresses in machines and structures are investigated by graphical methods, which are carefully checked in the beginning, by analytical proofs. This course includes the solution by graphical methods of such problems, before which analytical methods are comparatively impotent, as those which involve the friction losses in machines, and of the determination of the efficiency of mechanisms. The graphical method is also applied to dynamics by problems in the balancing of engine crankshafts working under specified conditions. The use of manufacturers' handbooks and drafting-room practice are given special attention. *One hour, entire session.*

606. Machine design: Required in the courses of electrical engineering and mechanical engineering. Instruction is given in the design of fastenings and machine parts, and in the general methods of arranging views. This course includes the design of cams, gear tooth outlines, quick-return motions, and link-work combinations, which supplements course 604, in kinematics. Scale drawings of simple machines are made from dimensioned sketches, which each student makes for himself from an actual machine or model. Tracings and blue prints are made from these drawings. All the instruction is intended to familiarize the students with modern drafting-room methods. *Four hours, entire session.*

SENIOR CLASS.

607. Machine design—lectures: Required in the courses of mechanical engineering and electrical engineering. These lec-

tures are intended to cover the general instructions to the students, such as the selection of materials for different machine parts, the rules for proportion of parts to secure strength, symmetry, and cheapness of manufacture, and the best methods of making, recording and preserving the calculations incidental to the design of a complete machine. Much valuable engineering data of current nature in the form of notes are given as a supplement to the text-book. Illustrated lantern lectures on subjects related to the course are given at intervals during the year. *One hour, entire session.*

608. Machine design—drawing: Required in the course in mechanical engineering. This is a continuation of the junior course in machine design. Original problems involving the design of complete machines to work under specified conditions are assigned, and the student develops the idea in the form of sketches. These are submitted to the instructor for criticism and are afterwards embodied in complete detail and assembly drawings. The calculations of each design are written up neatly and filed with the drawings. Special attention is given to the strength of the parts, to the harmonious and symmetrical appearance of the complete machine, and to the details as regards practical manufacture. *Six hours, entire session.*

609. Machine design—drawing: Required in the course in electrical engineering. The work given and the methods pursued are similar to those described in course 608, just preceding, but the amount of work required is reduced in proportion to the amount of time given to the subject. *Three hours, entire session.*

610. Technical Writing: This course is arranged for senior students in the engineering branches. Its purpose is to familiarize the student with the different forms of technical writing, and to provide exercise with written work; to pursue study of trade catalogs, technical magazines, scientific papers, and technical nomenclature. Course in Composition (Ac. 102a) is a prerequisite for this course. A loose-leaf note book, containing the written work, is submitted by the student each week, and is the basis for the evaluation of the term grade. The lectures and laboratory work are arranged as follows:

- (1) Lectures: complete notes required.
- (2) Graphic Methods for Presenting Facts: study of charts, curves and diagrams.
- (3) Engraving Processes: photo-engraving; wax-engraving; prepared drawings for copy for illustration.
- (4) Photographic Illustration: use of camera; selection of views for cuts; use of "skeleton" and "x-ray" photo-illustrations.

(5) Study of Trade Catalogs: preparation of a simple trade catalog for manufactured article.

(6) Study of Current Engineering Writings: patent office reports; periodicals, magazines and scientific papers.

(7) Visit to Power or Manufacturing Plant: preparing complete article from notes, illustrated with photographs, charts, diagrams and drawings. *Three hours, first term.*

GRADUATE STUDENTS.

611. The work offered during the post-graduate year is an extension of that of the senior year. More of the theory of the subject is taught, more intricate machines are involved, and problems are given involving the design of a series of machines for manufacturing some specific article. The problems arising in the design of a line of machines of different sizes are also taken up, including the applications of graphical methods and the use of factors of enlargement and reduction. Special attention is given to the effect of current practice on the proportion of machine parts.

A research study into the Patent Office records or some machine or device is offered in this course. This feature is to develop the inventive capacity of the student, and is given special attention.

Suitable text and reference books are used.

612. Methods of teaching drawing and descriptive geometry: A course in the methods of teaching drawing and descriptive geometry is given to those who wish to prepare for teaching these branches. This course includes advanced work in shape of problems, supplemented by frequent conferences with the instructor, a full bibliography of works on the subjects, and an extended course in reading.

Those who desire to avail themselves of an opportunity to practice the teaching of the subjects may be permitted to attend the meetings of the large classes in elementary work for the purpose of observing methods of teaching.

Those who show sufficient preparation may be allowed to assist in tutoring delinquent students and those who enter conditioned.

Special attention is given to the subject of drawing as taught in high school work.

613. Thesis: A thesis taken in this department may be a study of some machine or its parts; research in records of subjects relating to the work of the department; or, a study of current practice in the design of some specific machine. It is required to be written in parts, one of which is to be presented at the end of each term. The complete thesis is due on May 1st.

TEXT-BOOKS.

Cross' Mechanical Drawing, Jamieson's Isometric Drawing, Higbee's Essentials of Descriptive Geometry, French's Engineering Drawing, Keown's Mechanism, Spooner's Machine Design, Smith and Marx's Machine Design, Cathcart and Chaffee's Graphics, Halsey's Handbook Machine Design, Frost's Good Engineering Literature, Brinton's Graphic Methods for Presenting Facts.

COLLEGE OF AGRICULTURAL SCIENCES

CHEMISTRY.

PROFESSOR ROSS.

PROFESSOR HARE.

PROFESSOR BRAGG.

ASSISTANT PROFESSOR POWELL.

INSTRUCTOR MARSH.

ASSISTANT MARTIN.

ASSISTANT MOTLEY.

ASSISTANT CLIFT.

Instruction in this department embraces the following courses of lectures, systematic laboratory work being given in connection with each course for the practice of chemical analysis and chemical research:

FRESHMAN CLASS.

101. Course in general chemistry: This consists of a series of lectures including a discussion of the fundamental principles of chemical philosophy in connection with the history, preparation, properties, and compounds of the metallic and non-metallic elements, with the main facts and principles of organic chemistry. In this course the more common applications of chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and approved improvements necessary for presenting the subject in the most attractive and instructive form. *Four hours, entire session.*

REFERENCE BOOKS.

McPherson and Henderson's General Chemistry, Newth, Holleman, Smith, Mellor, Chemical Journals.

SOPHOMORE CLASS.

103 (b). Organic chemistry: This course, though somewhat more condensed, is similar to 103 (a), with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins with reference to their functions in the life processes of plants and animals. *Three hours, first and second terms.*

105. Agricultural chemistry: This course consists of lectures on chemistry in its application to agriculture and includes a thorough discussion of the origin, composition, and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of

soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock, and the various operations carried on by the intelligent and successful agriculturist. *Four hours, third term.*

REFERENCE BOOKS.

Snyder's Soils and Fertilizers, Snyder's Chemistry of Plant and Animal Life, Johnson's How Crops Grow, and How Crops Feed, Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Stoddart's Agricultural Chemistry, Storer's Agriculture in Relation to Chemistry, scientific journals, reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign agricultural departments and stations.

JUNIOR CLASS.

102. Industrial chemistry: Lectures, including discussion in detail of the processes and chemical principles involved in the most important applications of chemistry, in the arts and manufactures, to the preparation of materials for food and drink, for clothing, shelter, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufactured products, together with models and diagrams. *Three hours, first and second terms; four hours, third term.*

REFERENCE BOOKS.

Thorp's Industrial Chemistry, Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Sadtler's Industrial Organic Chemistry, Blount and Bloxom's Chemistry for Engineers and Manufacturers.

103 (a). Course in organic chemistry: Instruction in this subject embraces lectures and recitations upon the leading facts and principles of the chemistry of the carbon compounds, and includes a study of the method of preparation of the more important compounds, their properties, and their structural and stereo-chemical relations. *Three hours, first and second terms; two hours, third term.*

TEXT AND REFERENCE BOOKS.

Remsen's Organic Chemistry, Richter's Organic Chemistry, Gatterman's Practical Methods of Organic Chemistry.

SENIOR CLASS.

104. Course in Metallurgy: This consists of lectures and recitations upon the more important metals, such as iron and steel, copper, lead, tin, silver, gold, mercury, zinc, etc. It

includes a discussion of the physical and chemical properties of the metals and their alloys, the ores and their treatment, and the processes by which the metals are obtained from the ores, with chemical reactions involved. *Three hours, second and third terms.*

104b. Metallurgy: An advanced course in iron and steel. Lectures and recitations upon the special methods of manufacturing iron and its several alloys, or steels. Required of seniors in mining engineering, chemical engineering, chemistry and metallurgy, and mechanical engineering. *Three hours, third term.*

106. Engineering chemistry: A course given during the senior year, especial attention being devoted to the study of the construction and equipment of the chemical plants devoted to the manufacture of the more important chemical products. Excursions to various chemical and metallurgical plants during the course of the year will aid in familiarizing the student with the practical details of the operation of the leading industries. *Two hours, second and third terms.*

107. Course in theoretical chemistry: The more modern phases of chemical theory are given special attention. *Two hours, first term.*

108. Course in physical chemistry: Lectures and recitations. *Two hours, entire session.*

109. Methods of teaching chemistry in the secondary schools: In this course, students who have had the necessary preliminary work in chemistry will be afforded the opportunity of taking laboratory practice in experimental chemistry for lecture purposes and for the purpose of the practical study of methods of handling classes in experimental laboratory work. Advanced students can also take the course in the history of chemistry which is provided in the senior year of the course of chemistry and metallurgy. *Hours to be arranged.*

111. Course in advanced inorganic chemistry: *Two hours per week, entire session.*

LABORATORIES.

110. Courses of practical work in the laboratory are carried on in connection with all courses of lectures.

The laboratories, which are open from 9 A. M. to 5 P. M. during six days in the week are amply supplied with everything necessary for instruction in chemical manipulation in qualitative and quantitative analysis, and in the methods of prosecuting chemical research. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the chemical laboratory is furnished with a work table, a set of re-agent bottles and the common

re-agents and apparatus used in the qualitative and quantitative analysis.

At the close of the session he will be credited with such articles as may be returned in good order, the value of those which have been injured or destroyed will be deducted from his contingent fee.

SOPHOMORE CLASS.

(a) All students in the courses in agriculture, chemistry and metallurgy, chemical engineering, and mining engineering are required to take practical laboratory work. Students in the course in pharmacy, upon application, may be allowed to take this work.

The work of this course embraces the preparation of a number of non-metallic elements, and some of the more important inorganic compounds, the identification of metals by means of the blowpipe, and the qualitative separation and detection of the bases and acids.

JUNIOR CLASS.

110 (b). A course in quantitative analysis, embracing gravimetric and volumetric analysis, and including the analysis of limestones, iron ores, etc. *Six hours, entire session.*

SENIOR CLASS.

(c). A course in quantitative analysis, including analysis of fertilizers, soils, coals, ores, iron and steel, sugars and sugar products, feed stuffs, mineral waters, fluxes, slags, cinders, furnace gases, etc. The nature of the work is varied somewhat to suit the individual object of the student. *Six hours, entire session.*

(d). The laboratory course provided for students in the course in mining engineering embraces work in quantitative analysis, including assaying. In the latter portion of the course, especial attention is given to metallurgical analysis and the fire assay of ores of gold, silver, and other important metals. *Eight hours, entire session.*

(e). In the courses in pharmacy and veterinary science, instruction in urine analysis and in toxicology and toxical analysis is given during the last term.

(f). In the senior year, a laboratory course in organic chemistry is provided for students in the course in chemical engineering throughout the entire year, and for students in the course in chemistry and metallurgy during the third term. *Four hours, entire session.*

The short course includes systematic laboratory work in organic preparations, while the longer course embraces work in organic analysis, as well as in preparations.

112. In addition to the laboratory work above described, it is designed to give a short course of laboratory work in industrial chemistry, in which the student will apply upon a small scale the principles involved in the processes of some of the more important chemical industries.

Students completing the above courses are afforded ample facilities for advanced work along special lines.

AGRONOMY.

PROFESSOR DUGGAR.

PROFESSOR FUNCHESS.

INSTRUCTOR WINGARD.

The regular agricultural course extends through four years, and is intended to prepare those who complete it to become successful farmers, farm superintendents, and agricultural scientists in the various divisions of agricultural work in the U. S. Department of Agriculture, and the numerous agricultural colleges and experimental stations. The studies in the regular agricultural course are so arranged that a student may obtain a thorough education while acquiring the technical training necessary to the most successful management of farming operations and of agricultural investigation or teaching. No foreign language is required for graduation in this course, but those who expect to engage in scientific work of the U. S. Department of Agriculture or of the agricultural colleges and experiment stations, have the opportunity to study Latin, French and German, or any one or two of these.

For the benefit of those who are unable to spend four years at college, and who desire to prepare for the management of a farm, a short two-year course in agriculture is provided. In this the student devotes his entire time to those studies having a direct bearing on his future occupation.

The following courses of instruction are offered:

SOPHOMORE CLASS.

202. Corn: Lectures, recitations, and field practice on the cultivation, judging and improvement of corn. The student assists in harvesting certain experiments, becomes acquainted with a number of the best varieties, learns to select the best ears and the best plants, and notes the results of experiments in improving or breeding corn. *Two hours, lectures; two hours, laboratory, first term.*

203. Farm accounts: *Lectures and practice, two hours, second term.*

204. The small grains: Lectures, recitations, and field practice on wheat, oats, rye and barley. These plants are

treated both as grain crops and as forage plants. *Two hours, lectures; two hours, laboratory, third term.*

JUNIOR CLASS.

205. Leguminous forage plants and soil improvement: Lectures, recitations, and field practice on this most important group of forage plants, including cowpeas, soybeans, alfalfa, the clovers, vetches, etc. These plants are treated both with reference to their use as forage plants and as a means of improving the soil. *Two hours, lectures, two hours, laboratory, third term.*

SENIOR CLASS.

206. Cotton: Lectures, recitations, and field practice in identifying and comparing a large number of varieties growing on the experiment station farm; judging individual cotton plants, and lectures on the cultivation, fertilization, and improvement of cotton. The collection of varieties growing on experiment station farm usually numbers between fifty and one hundred varieties, and all of these are available for students' use. *Two hours, lectures, two hours laboratory, first term.*

207. Cotton classing: This course of laboratory work consists of practice in classing the commercial grades of cotton by comparing great numbers of samples procured from the offices of cotton buyers, with a nearly complete set of type samples owned by this department. A part of this practice will be under the supervision of experienced cotton buyers. *Hours by appointment.*

207a. Special crops: A course of lectures dealing with sugar cane, tobacco, rice, broom-corn, and other southern crops not treated in other courses. *Two hours, second term.*

208. Farm management: A course of lectures and practice dealing largely with rotation of crops, cost of producing different crops, systems of farming, selection of a farm, and plans for the best use of the farm or soil in which each student is most interested. This course is intended to give the student an opportunity to bring to bear on practical problems the information acquired from preceding courses of instructions in agriculture and related subjects. *Two hours, lectures; two hours, laboratory, third term.*

209. Investigation as a basis for a thesis: After a month spent in special reading under the direction of the professor of agronomy with a view to the selection of a subject for a thesis, the student will perform some agricultural experiment in crop production, soil treatment, or in testing farm machinery. Suitable facilities for such thesis work are provided in the fields and agricultural laboratories. In addition to conducting an original experiment, the student will review the

literature of agriculture to ascertain the results of similar or related experiments. It is expected that the results of some of these experiments will be worthy of publication. *Entire session.*

211. Soils and soils laboratory: Recitations intended to acquaint the student with the physical properties of soils, with the principal soils of Alabama, and especially those of the region from which each student comes. Instruction in this course will be given with a view to fitting a student to engage in the soil survey work of the U. S. Department of Agriculture, as well as to prepare him for the rational management of the soil of the farm. *Five hours, entire session.*

212. Methods of teaching agriculture: This is a course of lectures and laboratory and field exercises intended to meet the needs of those who expect to teach agriculture or nature study in the common schools and agriculture in the high schools. Special attention is given to the selection of material for illustrating the principles of agriculture, and practice will be given in conducting a number of simple demonstrations. Frequent excursions are made in the fields. *Two hours, third term.*

Post graduate courses in crop production, soils, and farm management are offered. The exact nature of the subject will depend upon the special requirements of the student.

Students taking a four-year course in agriculture receive instruction in the various branches of animal husbandry and horticulture, as well as in the natural sciences bearing on agriculture.

COURSES FOR SPECIAL STUDENTS.

213. Soils and fertilizers: (For special students only)—This is a lecture course in which the student is made familiar with the origin, chemical and physical properties, and management of the soil. A discussion of the relation of rotations, fertilizers, and lime to the maintenance of soil fertility is given. *Two hours, first and second terms. Tu., Th. 8-9.*

214. Terracing and drainage: (For special students only)—Field instruction is given in this course with the view of fitting the student to lay off terraces and design drainage systems on the farm. *Two hours, second term. F. 10-12.*

AGRICULTURAL ENGINEERING.

PROFESSOR BLASINGAME.

INSTRUCTOR WINGARD.

JUNIOR CLASS.

520. Drainage, terracing, and farm structures: While these topics are the subjects of lectures and recitations, chief stress

is laid on giving the student practice in locating terraces, laying out ditches, and planning systems of tile drainage. Such time as is available is given to the study and planning of barns, fences, gates, etc. *Two hours lectures, two hours laboratory, first term.*

SENIOR CLASS.

521. Farm engines: This course consists of lectures and laboratory practice with farm engines; application of power to farm operations, such as feed grinding, silage cutting, pumping, spraying, wood saws, etc.; transmission of power, including belt lacing, rope splicing, etc. Especial attention is given to finding and remedying engine troubles. *Two hours per week, second term.*

522. Farm machinery: It is the aim of this course to acquaint the student with improved farm machinery; adjustment, construction, repair, and operation of preparation machinery, seeding machinery, cultivators, haying machinery, etc. *Two hours per week, second term.*

BOTANY.

PROFESSOR ROBBINS.

ASSISTANT PROFESSOR MASSEY.

ASSISTANT MCRAE,

LABORATORY ASSISTANT DEAL.

The courses offered by the Department of Botany are designed to meet the needs of three different groups of students: Those desiring to secure some general acquaintance with the elementary facts and principles of a biological science as a necessary part of a cultural education; those desiring a thorough and detailed presentation of certain aspects of the subjects as a prerequisite to entrance upon the study of medicine or of some phase of applied botany, such as horticulture or agronomy; those seeking the fullest possible collegiate training in the subject as a preparation for teaching or for advanced work in the subject. For information as to laboratory equipment see page 19.

SOPHOMORE CLASS.

301. General botany: This course is planned to meet the needs of all three classes of students just named. It is designed to furnish a broad general introduction to the fundamental principles of a biological science, supplying the foundation upon which subsequent courses are built while at the same time giving to the non-specialist a good acquaintance with those biological principles which should form a part of his equipment for life. The course is not rigidly morphologi-

cal, but attempts to supply an introduction to the evolutionary history and the fundamental physiological processes of organisms, employing plants as illustrative material. It is composed of three parts. The fall term is devoted to the general morphology of the flowering plants, and to the fundamental physiological processes. The winter term is devoted to a general morphological study of selected representatives of the form phylla of the plant kingdom, the aim being to give the student a general acquaintance with the plant groups. The third term is devoted to the taxonomy of the spermatophytes, stress being laid upon economic forms. Required of all sophomores in the college of agriculture. A laboratory fee of \$1.50 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours, lecture, and four hours laboratory, entire session.*

302. Botany for Pharmacy Students: The first two terms of this course are very similar to course 301, described above. The spring term is devoted to a detailed study of the taxonomy of poisonous and medicinal plants. A laboratory fee of \$1.50 is charged, to cover the cost of material and laboratory sheets. Required of the sophomores and first year specials taking pharmacy. *Two hours, lecture; four hours laboratory, entire session.*

JUNIOR CLASS.

303. Agricultural bacteriology: This course is designed to supply to students contemplating specialization in animal husbandry or in some phase of applied botany, as horticulture, forestry, or agronomy, such an introduction to the principles of bacteriology as may furnish a basis for study of the special problems to be encountered in these lines of work. After a brief introductory discussion of the general morphology and physiology of the bacteria, the biological relations of the specialized groups will be taken up. The bacteriology of fermentation and putrefaction, the nitrogen-fixing and sulfur bacteria, the application of bacterially produced processes in the industries, and the more important problems of soil bacteriology will be dealt with in such details as time permits. The point of view throughout the course is distinctly economic. The forms pathogenic for man and for animals will not be considered. A prerequisite for this course is Agr. 301. A laboratory fee of \$2.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures, four hours laboratory, first term.*

304. Plant Physiology: This course deals with the fundamental processes involved in plant response and plant behavior as related to crop production. The topics covered in the lectures and laboratory are the following: The cell as the

physiological unit; the principles of absorption; transpiration and water movements in plants; water requirements of economic plants; mineral nutrition; the carbon relations of plants; the relation to nitrogen; the products of metabolism; digestion and translocation; respiration, aeration, and fermentation; growth; reproduction; the relation of plants to temperature, light, and toxic agents; variation and heredity. A prerequisite for this course is Agr. 301. A laboratory fee of \$3.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lecture, four hours laboratory, second and third terms.*

305. Plant Pathology: At the outset this course deals with the morphology, distinguishing characters, and methods of identification of those orders of the fungi which are concerned in the production of economically important plant diseases. The remaining time is spent on a detailed study of important diseases, bringing out the relation of the invading organism to the host. The diseases are studied in both laboratory and field. Toward the end of the course students are required to prepare a paper on some assigned subject in pathology. In this work familiarity with the sources of literature on plant diseases is obtained. Prerequisite for this course are Agr. 301, 303 and 304. A laboratory fee of \$2.00 is charged to cover the cost of material and laboratory sheets. *Two hours lecture, four hours laboratory, first and second terms.*

306. Plant Histology: A short one term course intended to familiarize the student with histological technique as a foundation upon which he can build. Prerequisite Agr. 301. *Two hours lecture, four hours laboratory, second or third term.*

307. Taxonomic botany: This course is intended to meet the needs of students desiring to acquire some acquaintance with the flora of the region. The work demands some such knowledge of the general morphology of the flowering plants as is supplied by course 301 or its equivalent. The student will be instructed in the use of keys and manuals, and the lectures will deal with the classificatory characters of the more important plant families. The laboratory work will be to a considerable extent adapted to the especial needs of the student, so that those who desire to pay particular attention to special groups, as an adjunct to work in horticulture or agronomy, will find an opportunity to do so. Required of sophomores in pharmacy and juniors in veterinary medicine. *Two hours lectures, four hours laboratory or field, third term.*

GRADUATE COURSE.

The department offers to properly prepared students opportunity for advanced work in botany, particularly in plant physiology and pathology. Students planning to do graduate

work should consult with the head of the department as early in the course as possible, preferably at the beginning of the junior year, in order that proper choice of the electives may be made. The general requirements for graduate work in the department are: the satisfactory completion of the undergraduate courses in botany, together with the required courses in organic and agricultural chemistry, courses in plant breeding and forestry (Horticulture 609 and 608), and a fair reading knowledge of German and French. By special arrangements with the department head, a student may begin graduate work without having fully met these requirements, with the understanding that they are to be fully met prior to serious entrance upon his work in the department, and in addition to the work in botany required for the Master's degree.

TEXT-BOOKS.

- 303. Marshall's Microbiology.
- 304. Hass and Hill, Introduction to the Chemistry of Plant Products; Duggar's Plant Physiology; Jost's Plant Physiology.
- 305. Duggar's Fungous Diseases of Plants.
- 306. Chamberlain's Methods in Plant Histology.
- 307. Gray's School and Field Botany, revised edition.

DEPARTMENT OF PHARMACY.

PROFESSOR BLAKE.

INSTRUCTOR MOTLEY.

ASSISTANT DUBBERLY.

The pharmacy department of this institution is a member in good standing of the American Conference of Pharmaceutical Faculties.

Three courses are offered—the two-year course leading to the degree *Graduate in Pharmacy*; the three-year course leading to the degree *Pharmaceutical Chemist*; and the four-year course leading to the degree *Bachelor of Science in Pharmacy*.

The practical work in pharmacy includes the manufacture of not less than two hundred pharmaceutical preparations and the compounding of not less than fifty prescriptions.

The work in pharmacognosy includes the study of more than 250 drugs, each of which the student is required to recognize by its physical and chemical properties, giving Latin name, common name, origin, habitat, constituents, medicinal action and dose.

FIRST YEAR.

- 401. (a). Pharmacy: Metrology; specific gravity; heat and applications of heat; fundamental operations of pharmacy;

apparatus used in pharmaceutical processes, pharmaceutical arithmetic. *Three hours, first term.*

(b). Pharmaceutical laboratory: Preparation of official and non-official galenicals, including the following classes of preparations: waters, spirits, liquors, mucilages, pills, elixirs, oleates, tinctures, etc. *Two hours, lectures, six hours laboratory, first and second terms.*

402. Pharmacognosy: The study of crude drugs; lectures, recitations, and practical work in identification. *Four hours, entire session.*

406. Pharmaceutical chemistry: A study of the official salts, official title, chemical formula, reactions, description, physical identification, dosage, etc. *Three hours, second and third terms.*

SECOND YEAR.

403 (a). Pharmaceutical technique and manufacturing pharmacy; official and non-official galenicals and chemical preparations; a thorough study of the U. S. P. and N. F. class work. *Three hours, entire session.*

(b). Manufacture of more difficult galenicals and U. S. P. chemical preparations. *Twelve hours, first term.*

(c). Alkaloidal assay. *Nine hours, second term.*

(d). The compounding of fifty or more prescriptions and individual instruction. *Four hours, third term.*

(e). Pharmaceutical testing and drug analysis. *Six hours, third term.*

404. Pharmacognosy: The study of crude drugs. This course is a continuation of course 402. *Three hours, first term.*

405. Prescription reading and incompatibilities: Lectures and recitations. *Three hours, second and third terms.*

407. United States Pharmacopoeia: This course is primarily a review intended to prepare the student to stand the State examinations. It covers all crude drugs, organic and inorganic chemicals and preparations found in the U. S. P. *Three hours, second and third terms.*

THIRD YEAR.

408 (a). Food and Drug Analysis: A study of the composition and method of analysis of leading food products, such as vinegars, fats and oils, dairy products, canned fruits and vegetables, alcoholic liquors, candies, preservatives, etc.

Drug analysis includes the chemical and microscopical examination of drug products that are especially liable to adulteration. *Twelve hours, first term.*

408 (b). Organic Chemical Laboratory: The manufacture of not less than 35 organic chemicals. *Twelve hours, second and third terms.*

TEXT AND REFERENCE BOOKS.

Army's Principles of Pharmacy, Steven's Pharmacy and Dispensing, Kraemer's Botany and Pharmacognosy, Caspari's Treatise on Pharmacy, Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacognosy, Scoville's The Art of Compounding, Beal's Prescription Practice, Dorland's Pocket Medical Dictionary, Ruddiman's Incompatibilities in Prescriptions, O'Connor's Commercial Pharmacy, Lyon's Pharmaceutical Assaying, United States Pharmacopoeia, United States Dispensatory, National Dispensatory, Prescott's Organic Analysis, Allen's Commercial Organic Analysis, Pharmaceutical Journals, Reports of American Pharmaceutical Association, Holland's Materia Medica and Toxicology.

HORTICULTURE.

PROFESSOR STARCHER.

ASSOCIATE PROFESSOR PRICE.

LABORATORY ASSISTANT ISBELL.

Instruction in this subject begins with the third term of the sophomore year and continues through the junior and senior years for students taking the regular four-year course in agriculture. A special two-year course in horticulture and related subjects is open to students who are unable to take the regular four-year course.

Practical exercises in the laboratory and field supplement the lectures and recitations. Constant attention is given to the fundamental principles and science upon which the best in practical methods is based.

SOPHOMORE CLASS.

601. Principles of plant culture: This includes the study of germination, propagation, transplanting, conditions of plant growth, etc.; also seed testing, preparation and sowing of seed beds. *Recitations, two hours, third term. W. 11-12; Th. 10-11.*

Plant propagation: (to accompany 601): Laboratory practice in seed testing, propagation of plants, pruning, etc. Students are required to submit illustrated notes. *Laboratory and field, four hours, third term. M., Th. 2-4.*

Text-books: Principles of Plant Culture (Goff), and The Nursery Book (Bailey).

JUNIOR CLASS.

602. Landscape gardening: An introduction to the general subject of landscape design. The trees, shrubs, vines, perennials, and annuals adapted to southern gardens are studied.

Individual problems are presented for the embellishment of the home and school grounds, and plans for public squares and parks are studied. *Lectures, two hours, first term. Tu., Th. 10-11.*

Text-books: Landscape Gardening (Maynard). References Landscape Gardening (Waugh); Modern Civic Art (Robinson); The Landscape Beautiful (Waugh); Weidenmann and other authors.

603. Vegetable gardening: Studies of the principal truck and garden crops with notes as to their origin, classification and economic importance; methods of growing, fertilizing, harvesting, marketing, and storing these crops. *Recitations and lectures, two hours, laboratory, two hours, second and third terms; second term, Tu., F. 11-12, Th. 2-4; third term, Tu., F. 11-12, W. 2-4.*

Text and reference books: Garden Farming (Corbett), Vegetable Gardening (Bailey), Up-to-date Truck Growing in the South (Davis), Vegetable Gardening (Vilmorin), Southern Gardener's Manual (Newman), Vegetable Gardening (Watts).

604. Orchard technique: A laboratory course in spraying pruning, fertilization, cultivation, and orchard management, supplementing course 603. *Two hours, second term. Tu. 2-4.*

References: The Pruning Book, Bailey Farm and Garden Rule Book (Bailey).

SENIOR CLASS.

605. Fruit growing: A study of the more important fruits and nuts of the United States, with special reference to their cultivation in home plantings and commercial orchards, harvesting, grading, packing, marketing, leading varieties for the several sections. *Recitations and lectures, three hours, entire session, laboratory two hours, first, second and third terms. M., W., F. 9-10; laboratory first and second terms, F. 2-4; third term, Tu. 2-4.*

Text and reference books: Principles of Fruit Growing (Bailey) 20th revised edition. Fruit Harvesting, Storing and Marketing (Waugh), Citrus Fruits (Coit), The Pecan (Hume), Citrus Fruit and Their Culture (Hume), Systematic Pomology (Budd and Hansen) and (Waugh), The American Fruit Culturist (Thomas).

606. Canning: Studies in the canning of the different fruits and vegetables. *Lecture one hour, laboratory two hours, first term, Tu. 8-9 and 2-4.*

607. Floriculture: This course briefly covers the subject of greenhouse construction and management, with special reference to growing of the leading vegetables and decorative plants with discussions on the forcing and marketing of vegetables

and cut flowers. *Lecture one hour, laboratory, two hours, second term. Tu. 8-9 and 2-4.*

608. Forestry: An elementary course, embracing a study of the forest conditions in Alabama, care of woodlots, preservation of wood, and the uses of the different southern woods. *Recitations and lectures, three hours; laboratory and field exercises two hours, second term. Tu., Th. 10-11; W. 12-1; laboratory M. 2-4.*

Text-books: Elements of Forestry (Moon and Brown), First Book of Forestry (Roth), Practical Arboriculture (Brown), Primer of Forestry (U. S. D. A.), Principles of Handling Woodlands (Graves), Economics of Forestry (Fernow), Principles of American Forestry (Green), Shade Trees in Towns and Cities (Solotaroff).

609. Plant breeding: A study of the improvement of plants, theories and laws of plant breeding, the origin of the choice varieties of garden and farm crops. *Lectures and recitations two hours, third term. Tu. and F. 8-9.*

Text and reference books: Principles of Plant Breeding (Gilbert and Bailey), Plant Breeding (Davenport), The Mutation Theory, Species and Varieties (DeVries).

610. Thesis: Students who expect to make their major work in horticulture are required to select a thesis subject not later than October 1st.

ENTOMOLOGY AND ZOOLOGY.

PROFESSOR HINDS.

ASSISTANT PROFESSOR THOMAS.

SOPHOMORE CLASS.

701. Zoology: A general course in zoology is required of all sophomore students in agriculture. The course is given in the first and second terms, and includes a brief discussion of the relation of animals to plants and minerals, the nature of cells, the functions involved in life processes and of the classification and distribution of animals. The different animal groups are studied, beginning with the single celled animals, and leading gradually to the most complex forms. *Lectures, two hours; laboratory four hours, first and second terms.*

Text: Hegner's College Zoology. A laboratory fee of \$1.00 is charged to pay the cost of material and laboratory sheets.

SENIOR CLASS.

702. Entomology: In accordance with the catalogue requirements the work in Entomology is taken by all senior students electing an agricultural group of courses, and by the

special two-year agricultural students during their second year. In addition to this senior work, the subject is open to post-graduate students, who have completed the senior course satisfactorily, as an elective course leading to the degree of Master of Science. The senior work is given during the fall and spring terms only, while the post-graduate work continues during the college year.

The senior courses are designed to familiarize the students who anticipate engaging in agricultural work with the most important general facts of entomology, including studies on the structure of insects as applied to their identification; a systematic examination of the different groups, and of the most common insect pests of each group, with methods for their control.

703. A series of lectures on bees and beekeeping is given, and demonstration of modern methods in manipulation of bees is afforded by the college apiary.

Others topics considered are:

The chemistry, preparation and application of insecticides, their merits and defects; tests for detecting adulterations; comparative tests of nozzles and other apparatus. The importance of improved methods of agricultural practice is shown and their effectiveness as controlling factors for insect pests is explained.

Methods in the collection, mounting and preservation of insect specimens are also studied, the student being required to make a systematic collection in the fall and in the spring an economic collection of the pests most closely related to the future occupation of the student. A laboratory fee of \$1.00 is charged for material. *Lectures, three hours; laboratory two hours, first and third terms.*

ANIMAL HUSBANDRY.

PROFESSOR TEMPLETON.

ASSOCIATE PROFESSOR FERGUSON.

ASSISTANT WELLS.

Instruction in this department is given in the class room, in the laboratories, and upon the animal husbandry farm with the live stock. While lectures are given on judging animals, the instruction does not stop with the lectures; the students are taken to the barn and feed lots where the animals are placed before them and each student is required to make a written report concerning the animals. Class-room work in dairy instruction is supplemented, strengthened, and made practical by requiring each student to work in the dairy lab-

oratory where butter is made, where Babcock test is used, where the lactic acid in cream is determined, etc. In the senior year, trips are made to cities, state and county fairs, and farms to study live stock judging and management. The live-stock provided by the college for the students use in studying breeds and judging consist of pure bred herds of Angus, Hereford, Shorthorn and Jersey cattle; Duroc-Jersey and Berkshire swine. Percherons, light horses and mules are available for class work.

The department now has the complete herd books of practically all the leading breeds of live stock in America. By the use of these the student is enabled to inform himself in regard to all pedigrees and to study the different scales of points which the breeders have adopted to represent the highest types of the various breeds. All class room instruction is given by means of text-books and lectures. Many of the lectures are illustrated by the use of a balopticon.

The courses in this department may be grouped under five main heads:

(1) Judging of live stock; (2) breeding of live stock; (3) feeding of live stock; (4) management of live stock; (5) dairying.

The student is given an opportunity to specialize in animal husbandry throughout the junior and senior years. The courses are as follows:

SOPHOMORE CLASS.

802. Judging beef cattle: The object of this course is to make the student familiar with the various classes and grades of cattle recognized by the leading stock markets, and to familiarize him with the leading beef breeds. Instruction is given by lectures, the use of the score card, and by comparative judging. *Laboratory, two hours, first term, M. 2-4.*

803. Judging dairy cattle: The student is familiarized with the dairy types and breeds, and is given judging instruction by the employment of the same methods as used in beef cattle judging (802). *Laboratory, four hours, second term, M. 2-4, W. 2-4.*

JUNIOR CLASS.

804. Dairying: The study of the secretion, character, composition, and production of milk, is made; proper methods of handling milk and cream for consumption, pasteurizing, sterilizing. The students are given thorough work in using the Babcock test and the lactometer, and the lactic acid test, together with the ordinary tests for the purity of milk and its adulterants. They are also drilled on all the phases of butter-making and standardizing milk and cream. Familiarity with

the construction, care and operation of the leading makes of cream separators, and other dairy equipment, is required. *Lectures, two hours; laboratory, two hours, first term, Tu., Th. 9-10; W., Th. 2-4.*

805 Swine judging: Considerable time is given to the study of the market classes of grades and the leading breeds of lard and bacon types of hogs adapted to southern conditions. The lecture work is followed by the students using the score card and doing comparative judging. *Laboratory, four hours, second term, W. 2-4; Th. 11-1.*

806. Sheep judging: The student is instructed in the methods of judging sheep, considering the market classes and grades, and the characteristics of the principal breeds. *Laboratory, two hours, third term, Th. 2-4.*

806 (a). Advanced stock judging: This course is for junior agricultural students who are especially interested in live-stock judging, and is a prerequisite to making the intercollegiate stock judging team. No college credit is given. *Hours to be arranged, latter half second term and the third term and first half following fall term.*

SENIOR CLASS.

807. Principles of animal breeding: The lectures of this course will embrace the principles and practices involved in the improvement of the domestic animals. The subjects of reproduction, variation, selection, heredity, line breeding, in-breeding, cross breeding, grading-up, etc., will be discussed in their relations to practical breeding problems. *Lectures, two hours, first term, M., W. 8-9.*

808. Advanced feeding: This course consists of lectures, supplemented by reference reading, upon the most profitable methods of producing, finishing and marketing, pork, beef, and mutton. The various concentrates and roughages are discussed as to their importance and efficiency as feeds for horses, mules and dairy cattle. *Lectures, three hours, entire session, M., W., F. 10-11.*

809. Meats: This consists of a study of the structure and composition of meats, quantity, cost and food value of the various cuts of beef, mutton, and pork; exercise is also given in judging the carcasses of the different classes of animals. A study is made of how the home-dressing and home-curing of pork is carried on. Lectures are given upon the effect of feeding and breeding of the different animals as affecting the value of the carcass and the quality of the meat. *Laboratory, two hours, second term, F. 2-4.*

810. Poultry: In this course an effort is made to acquaint the student with the different types of poultry with relation

to their use and value on the farm. Instruction is given also in feeding, managing, housing, and judging poultry. *Lectures, two hours, third term, M. W., 8-9.*

811. Judging horses and mules: Lectures and laboratory work are given in the judging of the various classes of horses and mules which are adapted to Alabama conditions. *Laboratory, two hours, second term, M. 2-4.*

812. Live stock management: The raising of horses, cattle, sheep, and swine as a business, is discussed in full detail, featuring the care and management in production and marketing. A study is made of the methods used by the most successful stock farmers. Practical work is given in preparing stock for shows and sales. This course will be limited to, and required of students majoring in animal husbandry. *Lectures, one hour; laboratory, two hours, entire session, Th. 8-9; Tu. 2-4.*

813. Herd book study: This includes a study of the various herd books with the view of becoming familiar with the pedigrees of the leading strains and families of the different breeds of livestock. Emphasis is made on the methods and rules of registration for each of the breeds of livestock. The rules and regulations governing the importations of livestock into the United States and into Alabama, together with the rules and regulations governing the moving of livestock within the United States and Alabama are studied. *Lectures, two hours, second term, M., W. 8-9.*

814. Dairying: This course is outlined to meet the requirements of the senior veterinary students and is similar to course 804. *Lectures, one hour; laboratory, two hours, second term, F. 11-1.*

SPECIAL TWO-YEAR COURSE IN AGRICULTURE.

FIRST YEAR.

815. Dairying: A separate course in this subject giving special attention and instruction for the benefit of the two-year students in agriculture, is maintained. The student is familiarized with the butter fat tests, the use of the lactometer, determination of the lactic acid in milk, churning, cream separation, etc. Practice is also given in determining the various common adulterants of milk. *Lectures, two hours; laboratory, four hours, first term, W., F. 8-9; Tu., Th. 2-4.*

816. Live stock feeding: This course is offered for the benefit of the first-year veterinary students, and the first-year special agricultural students. The food requirements of the animals' bodies are briefly considered. All through this course the practical, rather than the scientific side of feeding is emphasized. Special reference is made to feeding horses and dairy cattle. Veterinary students are allowed to discontinue

this subject at the middle of the second term. *Lectures, two hours, entire session. First term, Tu. 8-9; Th. 10-11; second and third terms, M., Th. 8-9.*

817. Live stock management: This course, also, is for the first-year veterinary students, and the first-year special agricultural students. It consists of a series of lectures on the care, housing, and management of horses, cattle, swine, and sheep. *Lectures and laboratory, three hours, latter half of second and the third term, Tu. 10-11; W. 2-4.*

818. Dairy cattle judging: The second term is devoted to judging dairy cattle, in the place of the course in dairying. A detailed study of the several different breeds of dairy cattle is made, and their chief distinctive characteristics pointed out. Exercises in practical judging are given by the use of the score card and by comparative judging at the barns. *Laboratory, four hours, second term, Tu., Th. 2-4.*

819. Judging beef cattle: In this course the student is familiarized with the leading breeds of beef cattle, and a study of the conformation of each type is made by practical judging. *Laboratory, two hours, third term, Tu. 2-4.*

SECOND YEAR.

820. Judging horses and mules: A special course of judging is maintained for the second year special students in agriculture. The various types of horses and mules and the market classes are studied. Representatives of the different classes are brought before the students who are, by detailed study, given an opportunity to become thoroughly familiar with each of them. *Laboratory, four hours, first term, M., W. 10-12.*

821. Poultry: This course in poultry consists of the study of the types and breeds; the housing, feeding and caring for all classes and ages. From time to time hours are spent in judging. *Lectures, two hours, first term, M., F. 12-1.*

822. Swine judging: This course is a continuation of the course of judging begun in the second year by the study of horses and mules. The leading breeds of swine are kept at the station barns, and the student has ample opportunity to become thoroughly familiar with each. The difference in function and conformation between the lard and bacon types, and the scrubs or natives, is pointed out. A study is made in practical judging by the use of the score card, and by comparative judging. *Laboratory, four hours, second term, M., W. 2-4.*

823. Meats: This course includes a study of the effects of various feeds on the meat and lard of hogs, and other animals; finishing stock for slaughter; slaughtering; dressing and curing of the meat. In the laboratory work the student is required

to put into practice the methods taught. *Lecture, two hours; laboratory, two hours, second term, Tu. 9-10; F. 2-4.*

824. Principles of breeding: A course of study of the principles of breeding live stock, giving special attention to the problems of the practical breeder. Much attention is given to fecundity, inbreeding, cross-breeding, grading-up, and inheritance. Variation; its causes and benefits are studied. *Lectures, two hours, third term, Tu. 8-9; F. 12-1.*

825. Sheep judging: A course is given to make the student thoroughly familiar with the leading breeds of sheep, their conformation and uses. *Laboratory, two hours, third term, F. 10-12.*

SCHOOL AGRICULTURE.

JUNIOR AND HOME ECONOMICS EXTENSION DEPARTMENT.

L. N. DUNCAN.

J. C. FORD.

I. B. KERLIN.

MARY FEMINEAR.

MARY E. KEOWN.

* MARJORIE PRICE CAMPER.

This department was created July 1, 1914, and is a part of the agricultural extension work conducted in Alabama by co-operation between the College and the United States Department of Agriculture.

The special lines of work in this department are as follows:

Organization of boys' corn clubs.

Organization of boys' pig clubs.

Organization of girls' canning clubs.

Home demonstration work for farm women.

Poultry clubs.

Movable schools of agriculture.

* In co-operation with the Alabama Girls' Technical Institute, Montevallo, Alabama.

COLLEGE OF VETERINARY MEDICINE AND SURGERY

By direction of the United States Civil Service Commission and Department of Agriculture, this college has been added to the list of accredited veterinary colleges, and placed in class A.

VETERINARY MEDICINE AND SURGERY

PROFESSOR CARY.

ASSISTANT PROFESSOR MCADORY.

INSTRUCTOR WEBB.

INSTRUCTOR FERGUSON.

INSTRUCTOR SUGG.

LECTURER BAHNSEN.

LECTURER WHITE.

LECTURER MEADOR.

PHYSIOLOGY AND VETERINARY SCIENCE.

101. Physiology: The students in the special agricultural course, in all of the pharmacy courses, in the course in chemistry and metallurgy, and in the course in veterinary medicine and surgery, all study elementary physiology.

The aim of this course is to teach anatomy, histology, hygiene and sanitation. The instruction is given by lectures, demonstrations, and text-book. Text-book: Martin's Human body. (Advanced). *Two hours, entire session.*

102. Veterinary science (elective): For students in agriculture. Lectures and chemical work in the junior year. In the senior year, the student may elect, with the consent of the professor in charge, six hours in the veterinary work. The aim of the instruction given to the agricultural students is to teach such lessons as will enable them to prevent many diseases on the farm by correct sanitation. At the same time they will be instructed in the ways and means of treating and handling the common diseases of farm animals. This work will prepare them for the "first aid" treatments and emergencies as well as for the course in veterinary medicine and surgery. *Five hours, junior year; six hours, senior year.*

VETERINARY MEDICINE AND SURGERY.

The four-year course in veterinary medicine and surgery leads to the degree of Doctor of Veterinary Medicine. It has been established to meet the demand of the young men of the

South who desire to become educated veterinarians, and for students who desire to prepare for the study of human medicine.

EQUIPMENT.

The main veterinary building has an independent gas plant and a connected sewer system. It is supplied with electric lights and water. The building contains an office, two lecture rooms, a physiological laboratory, and a museum on the first floor; on the second floor are located two research laboratory rooms, a library and reading room, a large lecture room containing an incubator room, and all the necessary apparatus for pathological, histological, and bacteriological work.

A separate building is used as a house for small animals (rabbits, guinea pigs, pigeons, etc.) that are employed for experimental and demonstration work in bacteriology, histology, and physiology.

The anatomy division has a separate one-story brick building with good ventilation and extensive sky light. It is supplied with gas, water, and electric lights. The anatomy museum contains the skeletons of man, the horse, the ox, the sheep, and the pig, and models of limbs and special organs of man and the horse. It is also supplied with different lots of bones of the horse with dissected and dried limbs showing the relation and attachment of muscles. An hexagonal operating pavilion thirty-six feet in diameter is used for surgical clinic and contains a simplicity operating table. It is supplied with water and electric lights and lockers for students.

The veterinary hospital contains five box stalls, four open single stalls, an office, and feed room, on the first floor; a large room for storing hay, fodder, and feed, is found on the upper floor. The veterinary department has for its exclusive use about six acres of land divided into lots, pens and paddocks. In one of the lots are located two large sheds, having a capacity for accommodating one hundred and twenty-five cattle or large animals. These sheds are used for isolation of animals affected with infectious diseases.

HOG CHOLERA SERUM PLANT.

The hog cholera serum plant occupies about twenty-five acres of land southwest of the College grounds. Upon this are located a large two-story brick and cement serum building (76 x 30), a brick and cement virus building (30 x 36), and a large hog barn (60 x 100) with cement floor. The rooms in the virus and serum buildings are sufficiently large to admit students in the veterinary medical and agricultural courses for instruction in inoculating hogs and in the various processes in making virus and serum. Some of the veterinary medical students work every day in the serum plant and thus become conversant with sterilizing, bleeding, hypering, inocu-

lating and handling the virus, the serum and the hogs.

A well equipped slaughter house has just been completed for the use of the serum plant, the College and the town of Auburn. It is available to veterinary students for practical experience in meat inspection.

COURSES OF STUDY.

The four-year veterinary course students take six terms of work in the department of animal husbandry and dairying, two terms work in pharmacy; seven terms of work in the chemical department; two terms of work in botany, and one year's work in English. The facilities and equipment of these departments are excellent.

The veterinary course is especially strong in practical laboratory work.

1. In anatomy the work of dissection is continued through the first, second and third years. It is a well established fact that useful surgery or real anatomy can not be acquired without careful and thorough work in the dissecting room. Special stress is given to comparative anatomy of the horse, ox, sheep, pig, dog and poultry.

2. Clinical laboratory work is also required throughout the course. The clinical work comes six days in the week and the cases presented embrace mules, horses, cattle, sheep, dogs, poultry, and hogs. The variety is such as to illustrate a large number of diseases, surgical operations, and therapeutic applications.

3. The physiological laboratory is supplied with apparatus for tests and experiments in physiology.

4. The laboratory for pathology, histology, and bacteriology is extensive, and is fully fitted with the latest apparatus. This laboratory has been the outgrowth of twenty-five years of cumulative additions. The aim is to teach students to work in the laboratory rather than to memorize the printed page of the text-book.

5. In chemistry and toxicology the students work in one of the best of chemical laboratories.

6. In pharmacy the students work in practical pharmacy for five hours a week for two terms. In this they learn to recognize compounds and dispense drugs.

7. The animal husbandry department affords ample facilities for practice in feeding and judging cattle, sheep, hogs, horses and mules.

8. The dairy department gives practical laboratory work in dairy operations and in handling and feeding dairy cattle.

9. The botanical department is well equipped and gives excellent opportunity for laboratory work in poisonous and medicinal plants.

10. The subjects in the course of study are such as are

required in the leading veterinary colleges of America. The course meets the requirements of the American Veterinary Medical Association and the Bureau of Animal Industry and United States Civil Service Commission. It is the aim to have the teaching staff meet the requirements of the best standards. The length of the course is four years of nine months each.

Graduates of the College of Veterinary Medicine are admitted by civil service examination to the appointments in the service of the Bureau of Animal Industry of the United States Department of Agriculture and to the army, and also to membership in the American Veterinary Association.

DESCRIPTION OF COURSES.

FRESHMAN CLASS.

103. General Chemistry (Agr. 101): This consists of a series of lectures including a discussion of fundamental principles of chemical philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements, with the main facts and principles of organic chemistry. In this course, the more common applications of chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and approved improvements necessary for presenting the subject in the most attractive and instructive form. *Four hours in class, six hours in laboratory, entire session.*

104. Physiology: This course consists of lectures and textbook work on the actions and functions of the various organs, etc., of the human body. *Two hours, entire session.*

105. English (Ac. 102a)—Composition and rhetoric: The principles of exposition, narration and description are studied. The students are required to apply these principles in set themes once a week and in frequent exercises. As often as possible the instructor holds personal conferences with students in order to correct, assist and stimulate them. Text-book: Boynton's Principles of Composition. *Three hours, first term.*

106. English (Ac. 102b). American Literature: A survey of the history of American literature together with the study of select masterpieces. The recitations will be devoted chiefly to the discussion of the literature assigned for study, but the students will be required to master a concise history of the subject and to keep notes on both the history and the selections. Text-book: Newcomer's American Literature. *Three hours, second and third terms.*

107. Anatomy: Consists chiefly of dissections with a few lectures and reviews. It covers during this year (a) Osteology, a study of the bones; (b) Arthrology, a study of the articulations; (c) Myology, a study of the structure, form and relations,

attachments, and functions of muscles. *Ten hours, entire session.*

108. Histology: Treats of the minute or microscopic anatomy of the body. It includes fixing, imbedding, sectioning, mounting, staining and a microscopic study of cellular and inter-cellular structure of tissues. It is taught by lectures, text-books and laboratory work. *Five hours, entire session.*

109. Judging dairy and beef cattle: It includes practical exercises in judging the breeds and types of dairy and beef cattle. This work is done by the Animal Husbandry Department. *Two hours, first term.*

110. Judging swine and sheep: This embraces practical exercises in determining the good and bad points of swine and sheep. *Two hours, second term.*

111. Judging horses and mules: This consists of lectures and practical exercises in judging the various breeds and classes of horses and the classes of mules. *Two hours, third term.*

112. Clinics: This is a poly-clinic where all kinds of cases and all kinds of animals are clinically examined, studied, operated on, and treated. *Three hours, entire session.*

SOPHOMORE CLASS.

113. Embryology: A study of the development of the embryo in its various stages from the fertilized ovum to the full grown embryo, and is designed to prepare students for the study of the principles of breeding and obstetrics. *Three hours, first term.*

114. Organic chemistry (Agr. 103b): This course, though somewhat more condensed, is similar to Agr. 103 (a), with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins, with reference to their functions in the life processes of plants and animals. *Three hours, first and second terms.*

115. Anatomy: This covers (a) Internal organs; (b) blood vessels, heart, lymph vessels and lymph glands; (c) the nervous system; (d) special sense organs; (e) genito-urinary organs; (f) the foot; (g) the larynx. *Ten hours, entire session.*

116. Veterinary medicine: A course covering the internal diseases of solipeds, the horse, mule and ass. *Three hours, entire session.*

117. Clinics: Surgical, internal and external diseases of all animals in the hospital and at the poly-clinic are examined, inspected and studied and recorded by the student. *Eight hours, entire session.*

118. Bacteriology: Includes a study of the pathogenic bacteria, their classification, modes of reproduction, cultural and staining characters, habitat, methods of causing disease, etc. *Six hours, entire session.*

119. Physiological chemistry: Treats of the chemistry of

sera, globulins, proteids and the other organic bodies or compounds found in animal bodies. *Four hours, third term.*

120. Pharmacy: Treats of the physical and chemical characters of drugs, preparation of various official drugs and the compounding of prescriptions employed in veterinary practice. *Ten hours, second and third terms.*

121. Botany: A study of poisonous and medicinal plants. *Five hours, third term.*

JUNIOR CLASS.

122. Surgery: This embraces general and special surgery of domestic animals. *Four hours, entire year.*

123. Obstetrics: It embraces a study of the normal and diseased conditions of the animal body during pregnancy. *Two hours, entire session.*

124. Anatomy: Embraces the comparative anatomy of the (a) ox; (b) sheep; (c) swine; (d) dog; (e) cat; (f) poultry. *Eight hours, entire session.*

125. Botany. A continuation of No. 121: A practical study of poisonous and medicinal plants. *Six hours, first term.*

126. Veterinary medicine: Embraces a study of the special pathology, etiology, symptoms, diagnosis and treatment of internal diseases of (a) cattle; (b) sheep and goats; (c) swine. *Three hours, first term; four hours, second and third terms.*

127. Veterinary physiology: Treats of normal actions or functions of the organs and apparatus of the bodies of domestic animals in health. *Three hours, first and third terms; four hours, second term.*

128. Clinics: A study of general and special surgical and medical cases presented at the hospital and poly-clinic. *Ten hours, entire session.*

129. Infectious diseases; Embraces a study of the causes, modes of transmission, methods of diagnosis and prevention of communicable diseases of domestic animals. *Three hours, second and third terms.*

SENIOR CLASS.

130. Veterinary medicine: This course treats of the internal diseases of the (a) dog; (b) the cat; (c) poultry. *Three hours, first term.*

131. Therapeutics: A study of all materials used in disease and considers the action of these materials or drugs during health and in disease, and their application or uses in diseases. *Five hours, first and second terms.*

132. Principles of breeding (Agr. 808): Embraces the principles and practices involved in the improvement of domestic animals. The subjects of reproduction, variation, selection, heredity, grading up, etc., will be discussed in their relations to practical breeding problems. *Two hours, first term.*

133. Dairying (Agr. 814): The study of the secretion, characters, composition and production of milk is made; proper methods of handling milk and cream for consumption, pasteurizing and sterilizing are covered. Students are taught how to use the Babcock tester, the lactometer, and to test for lactic acid, for purity and adulterants. They are drilled in butter making and in standardizing milk and cream. Familiarity with the construction, care and operation of the leading makes of cream separators and other dairy equipment is required. *Four hours, second term.*

134. Feeding: Embraces the food requirements for different animals; calculations and mixing of rations, using the various concentrates, roughages, etc. *Three hours, third term.*

135. Surgery: This will be a continuation of special surgery, foot diseases and lameness. *Two hours, first term.*

136. Clinics: Includes special and poly-clinic cases in surgery, internal medicine, infectious diseases, lameness, etc. *Eight hours, entire session.*

137. Pathology: Deals with the anatomy and histology of diseased tissues and organs. The cellular and inter-cellular changes that occur in disease are studied in text-book and lectures, and in the laboratory diseased cells and tissues are examined macroscopically and microscopically. *Seven hours, first term; eight hours second term.*

138. Meat inspection: A study of the ante-mortem and post-mortem conditions of healthy and diseased animals. The decomposition, putrefaction and fermentation and adulteration of meats are studied. This course embraces lectures, text-book work and laboratory work in class room and slaughter house. Auburn now has a well-built and equipped slaughter house. *Three hours, first and second terms.*

139. Milk inspection: Includes a study of diseases of dairy cattle (tuberculosis, udder diseases, etc.,) filth, bacteria and adulterants of milk; feed, water supply, dairy barns, pens and pastures; dairy cans, buckets, bottles, wagons, pasteurizers, sterilizers, milk houses and milkers. *Five hours, third term.*

140. Parasites: This course deals with the plant and animal parasites that infest man and animals. The hosts, anatomy, classification, modes of life, life history, toxic and other effects on hosts are studied. Specimens are collected, classified, mounted or preserved. *Three hours, second and third terms.*

141. Surgical exercises: This consists of a series of practical exercises covering the most common surgical operations. *Three hours, third term.*

142. Urinalysis: This covers a laboratory course in the chemical analysis of the urine of animals. *Three hours, third term.*

143. Thesis: Every student must develop a thesis on some veterinary subject, and this thesis must contain some original investigation. *Three to four hours, entire session.*

144. Toxicology (Agr. 110e): Embraces a study of the actions of poisons on animals, and a laboratory course in the official tests for the different poisons. *Seven hours, third term.*

TEXT AND REFERENCE BOOKS.

General Chemistry—McPherson and Henderson.

Organic Chemistry—Moore.

Physiology Recitations—Martin's Human Body.

Physiology Laboratory—Fish's Elementary Exercises.

Veterinary Physiology—Smith's Manual of Veterinary Physiology.

English—Boynton; Newcomer.

Anatomy—Sisson's Comparative Anatomy; Chauveau.

Clinical Laboratory—Clinic Note Books.

Histology—Bailey; Lectures.

Embryology—Prentiss; Bailey; Lectures.

Principles of Breeding—Marshall.

Feeding Livestock—Henry; Smith; Jordan.

Livestock Judging—Craig; Plumb; Lectures.

Dairying—Wing.

Botany—Gray; Pammel; Lectures.

Pharmacy—Stevens; Lectures.

Bacteriology—Moore; Lectures.

Pathology—Kinsley; Zeigler; Kitt, Adami.

Obstetrics—Williams; DeBruin; Fleming; Dalrymple.

General Surgery—Frohner; Moeller; Dollar; Lectures.

Special Surgery—Moeller; Merrillat; Frohner; Reeks; Lectures.

Surgical Exercises—W. L. Williams.

Materia Medica and Therapeutics—Frohner; Wilcox; Winslow; Fish; Quitman.

Diseases of the Dog—Muller-Glass.

Veterinary Medicine—Law, Vols. 1, 2, 3; Moussu; Friedberger and Frohner; Huytra and Marek.

Diseases of Cattle—Dollar; Moussu; U. S. Department of Agriculture.

Diseases of Swine—Kinsley.

Diseases of Poultry—Kaupp.

Infectious Diseases—Moore; Law, Vol. 4.

Parasites—Neumann; Law, Vol. 5; Kaupp.

Meat Inspection—Edelmann; Mohler-Eichhorn; Ostertag.

Milk Inspection—Ernest-Mohler-Eichhorn; Conn.

Lameness—LaCroix.

Toxicology—Tanner; Fish.

Urine Analysis—Fish.

Restraint of Animals—White.

Castration of Animals—White.

ORGANIZATIONS

CADET BAND.

A. L. THOMAS, Bandmaster.

Three musical organizations are maintained—the band, the orchestra, and the glee club. Membership in these organizations is open to any student who has musical talent.

The band is maintained by the college for students who desire to develop their musical ability and for those who wish to learn music. It furnishes music for all college exercises, and takes part in military manoeuvres. Regular and individual instruction is given free of charge during the first term, embodying the rudiments of music and general musical information in conjunction with the practical instruction on the instrument. Public concerts are given weekly during the second term, and engagements elsewhere are usually arranged.

A gold medal is given each year by the bandmaster to the member who makes the best record.

The orchestra is an organization for musical recreation, and members are carefully selected by the director according to their musical ability.

The glee club, comprising the quartet, chorus, and stringed instruments, is a student organization. The services of a musician are secured to assist with the instruction and training of the quartet and chorus. Two concerts are given at the college and concert tours are arranged during the second and third terms.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

D. F. FOLGER, General Secretary.

This association is regularly organized and a suite of well furnished rooms has been secured for its exclusive use. Through its weekly meetings and Bible Study Classes it exerts a wholesome Christian influence among the students.

Students are advised to unite with the association when they enter the college.

The ladies of the different churches in Auburn are organized into an auxiliary association to the Y. M. C. A. of the college.

LITERARY SOCIETIES.

There are two literary societies connected with the Institute—the Wirt and the Websterian. Each has a hall in the main building. These societies hold celebrations on the evenings of Thanksgiving day and 22nd of February.

To encourage the literary societies the trustees have directed that a medal be awarded at Commencement to the member of each society who is both efficient and regular in attendance, and who is the best debater. The method of selection is determined by the faculty.

SOCIETY OF THE ALUMNI.

The annual alumni oration is delivered by a member of the society in Langdon Hall on Alumni Day, Monday of Commencement week.

OFFICERS OF THE ALUMNI ASSOCIATION.

Walter Merritt Riggs, '93, Clemson College, S. C.-----Orator
 Thomas Bragg, '01, Auburn, Ala.-----President
 J. B. Lovelace, '14, Auburn, Ala.-----Secretary and Treasurer

ENGINEERING SOCIETY.

All students in the courses of engineering and architecture are eligible for membership in the Engineering Society. Meetings are held twice a month, and the chief purpose of the society is to promote personal fellowship among the members, and closer affiliation with practical engineers. Prominent engineers in all lines are invited to address the society from time to time upon subjects connected with their work. At other meetings the program is supplied by the student members, thus giving opportunity for the students in one department to become somewhat familiar with the problems met with in other lines of engineering.

Suitable quarters have been provided for the society in the new Broun Engineering Hall. No regular dues are required of the members, but an occasional assessment is made to cover necessary expenses.

ARCHITECTURAL ASSOCIATION.

The Architectural Association is open to all members of the college who take work in the department of architecture. Bi-weekly meetings are held in the architectural library, and papers presented on subjects of professional interest, not directly covered in regular courses; the discussions that follow are always lively ones. Current articles in the technical journals are also taken up. Nothing could furnish a more striking example of the enthusiastic attitude shown by architectural students everywhere toward their chosen work, than these gatherings of the architectural association.

AGRICULTURAL CLUB.

The Agricultural Club was organized in 1907. All students interested in agriculture and the agricultural sciences are eligible for membership. The members of the Agricultural

Faculty take an active part in the work of the club. Meetings are held once a week, and an effort is made to promote interest in all lines of agriculture, to develop a spirit of good fellowship among the students of the course, and bring them in contact with prominent workers of the science as opportunity offers to present them on the regular program.

Meetings are held in the club rooms in Comer Agricultural Hall.

VETERINARY MEDICAL ASSOCIATION.

The Veterinary Medical Association was organized in 1907. The meetings are held bi-weekly in the veterinary building. Medical subjects are discussed by the members or by some invited speaker or member of the veterinary faculty. All students of the Veterinary College are eligible to membership. The objects of the association are fraternal, intellectual and cultural. The annual banquet of this association is an occasion of good fellowship for the students, faculty, and veterinary alumni.

GYMNASIUM AND ATHLETIC FIELD.

The new Alumni Gymnasium offers improved facilities for complete physical training in outdoor and indoor work. The college authorities attach due importance to the value of robust, physical health. Military drill according to the Federal Law is required of all able-bodied students, and ample opportunity is also offered for work in the gymnasium and field sports. The aim of the athletic authorities is to develop, not only a set of highly trained athletic experts in particular fields of sports, but to interest each individual student in the care and development of the body through some form of athletic activity. While, therefore, every effort is made to maintain a high standard of athletic efficiency in various representative teams, every member of the "Auburn" student body is encouraged to gratify his love for games and sports, as well as to assimilate the "Auburn Spirit" in its intensest form; a spirit splendidly exemplified by the Alumni in making possible this handsome Gymnasium. This beautiful athletic home ranks "Auburn" as one of the best equipped colleges in the land for the development of the physical welfare of its students. Under present conditions it is possible for two thousand students to take physical exercise at the same time.

DRAKE FIELD—A new athletic field, named in honor of the Surgeon, Dr. J. H. Drake, has been provided for baseball, football, and track athletics. It is situated on the experiment station grounds near the gymnasium. It will be gradually beautified and equipped with necessary buildings and accommodations.

DISCIPLINE REGULATIONS.

The government of the college is administered by the president and faculty in accordance with the code of laws and regulations enacted by the trustees.

Each student upon entering is required to sign his name in the matriculation book and pledge himself to obey the rules and regulations of the college.

All students are required to wear the prescribed uniform.

Attention to study and punctuality in attendance on recitations and all other duties are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using or causing to be brought into the college limits, intoxicating liquors.

Students are not permitted to participate in any public entertainments, or games, without previously obtaining the consent of the faculty.

No student will be permitted without the approval of his parent or guardian, to take part in a public game of football.

No student who has failed in two or more subjects will be permitted to be absent from college for athletic contests or other purposes.

(a) Every absence from recitations or examination is graded zero.

(b) When the grade of a student is lowered by reason of absence, for which satisfactory excuse can be rendered, a special re-examination may be subsequently granted, and the grade made on the special re-examination alone is substituted for that previously received.

(c) Only sickness, as reported by the surgeon, or absence by reason of family sickness, or official or collegiate business, will constitute a satisfactory excuse for granting a re-examination.

When a student is called away from college by his parents for reasons other than those specified above, his zeros for absence are not removed.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

The term grade of a student is the average of his daily sessional and term examination marks, found by giving due weight to the term examination.

Only privates of the senior class in full standing who are candidates for graduation may be excused by the president from all military drills, and also students over twenty-one years of age *at the time of entering college* that are permitted to devote their time to one special study, as chemistry, agri-

culture, pharmacy, or engineering, provided the time devoted to drill is spent by them in laboratory work.

No student can remain an officer who receives during the session more than one hundred demerits.

BOARDING.

The students board at Smith Dining Hall or with families of the town of Auburn, thus enjoying all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who are guilty of any violation of order. The report of the inspector is made to the commandant at stated intervals.

Students, after selecting their boarding houses, are not permitted to make changes without obtaining permission from the president, and this permission is given only at the close of a term, except for special reasons approved by the parent.

MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapacitated to bear arms, are required to engage in these exercises; privates of the senior class are exempt.

The drills are short, and the duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students, unless excused on the written request of parents for religious scruples, are required to attend these exercises, and also to attend the church of their choice on Sunday morning.

Opportunities are also offered for attending Bible classes every Sunday.

DISTINCTIONS AND HONORS.

Certificates of highest distinction and of distinction are given on the basis of credits, one credit being considered as the equivalent of one recitation per week for one term. Two hours of laboratory or shop work or drawing are counted as one hour of recitation. An undergraduate student taking less than an average of eighteen credit hours per term will not be eligible for distinction. Certificates will be awarded to those students who have not received more than forty demerits, and who comply with the scholarship requirements announced by the faculty.

Members of the senior class who attain highest distinction are published as *Graduates with Highest Honor*; those who attain distinction are published as *Graduates with Honor*; seniors who do not attain distinction, but who attain a grade of sixty per cent or above are published as *Graduates*.

RECORDS AND REPORTS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

At the close of each term and at regular intervals reports giving the grade made by each student are sent to the parent or guardian.

EXAMINATIONS.

Written examinations on the studies of the half-term are held by each professor during the months of October and February. Each examination occupies one hour.

At the end of each term written examinations, or written and oral, are held on the studies passed over that term.

Special examinations are held only by order of the faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examinations can be promoted to full standing in the next higher class only on satisfactory examinations at the opening of the next session.

It is required that every student who enters college shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within three weeks of the examination, except for providential reasons.

RE-EXAMINATIONS.

Re-examinations for deficiencies incurred by students before entering the senior class shall be set not later than the first week in April, except when deficiencies are being made up in class. Seniors failing in any subject will have two opportunities for removing the conditions.

No senior who fails on two final examinations will be re-examined.

No re-examination will be given seniors after the Saturday before Commencement.

HONOR SYSTEM.

During the session of 1910-11 the Honor System, which for years had been in effect in the higher classes, was adopted by the entire student-body of the institution, to apply to all work done in the class-room and on examinations. Under this system the student is pledged neither to give nor receive any assistance, whatsoever.

All students upon entrance subscribe to the Honor System as in force at this institution.

Proper regulations for administering the system have been adopted by the student-body.

The spirit of truth and honor, thus fostered in the examination room, is an efficient means of raising the scholarship, and tends to inculcate high ideals of honor among the students.

SCHOLARSHIPS.

The following scholarships and prizes have been established:

THE WILLIAM LEROY BROUN MEMORIAL SCHOLARSHIP OF \$170, established by the Alumni Society, in memory of the late distinguished president of the Institute.

THE LIGON SCHOLARSHIP OF \$170, established by Col. R. F. Ligon, Montgomery, Ala.

THE THOMAS SCHOLARSHIP OF \$170, established by Judge William H. Thomas, Montgomery, Ala.

THE BALL SCHOLARSHIP OF \$170, established by Mr. Fred S. Ball, Montgomery, Ala.

THE DUNKLIN SCHOLARSHIP OF \$600, established by Mr. and Mrs. J. C. Street, Opelika, Ala., in memory of Prof. J. T. Dunklin, former professor of Latin in the college.

THE 1908 SCHOLARSHIP OF \$150, established by the Class of 1908.

THE ALICE CARR SCHOLARSHIP OF \$180, established for young women by the late Miss Alice Carr, Auburn, Ala.

THE RANSOM MEMORIAL SCHOLARSHIP OF \$125 per year, established by the Alumni Association in memory of the late Prof. A. McB. Ransom, is available for students in the junior and senior classes of the course in chemistry and metallurgy.

THE JEWISH LOAN SCHOLARSHIP OF \$1,000, established by a former student of the college.

A scholarship has been established for worthy musicians who are in need of assistance in defraying their college expenses.

THE HENDERSON SCHOLARSHIP OF \$100, established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE SIDNEY SMITH MEMORIAL SCHOLARSHIP OF \$100, established by his parents, Mr. and Mrs. Smith, Bessemer, Ala.

THE C. S. YARBROUGH SCHOLARSHIP OF \$1,000, established by Dr. C. S. Yarbrough, Auburn, Ala.

The scholarships enumerated above are loan scholarships, granted to worthy young men and women, to be returned after graduation.

THE ROBERT E. LEE MEMORIAL SCHOLARSHIP OF \$100, an annual donation for the son of a Confederate veteran, established

by the Children of the Confederacy of Alabama under the auspices of Mrs. Mary G. Pickens.

The above named scholarships and ten other scholarships are administered by the Alumni Society. (*For information, address J. B. Lovelace, Secretary*).

THE GRAYDON SCHOLARSHIP FUND OF \$3000, established by the family of the late Augustus T. Graydon, of South Carolina, a loyal alumnus of the class of 1914.

SOUTHERN RAILWAY LOAN SCHOLARSHIP OF \$1000, established by the Southern Railway in memory of the late W. W. Finley, President of the Southern Railway.

PRIZES.

THE THOMAS ESSAY PRIZE, a gold medal offered by Hon. William H. Thomas, of Montgomery, Ala., for the best essay by any undergraduate student of the college. The essay must be written under the supervision of the department of English.

THE SOUTHERN INTERCOLLEGIATE ARCHITECTURAL COMPETITION in Senior Design is held in the Spring of each year by an association composed of the leading colleges of the South offering courses in architecture. Funds for suitable prizes are provided by the State Chapters of the American Institute of Architects. At the close of the competition the competing drawings are exhibited in turn at each of the schools taking part in it.

THE ORATORICAL PRIZE, medal to that member of the junior class who composed and delivered the best oration on junior class day of Commencement. 1916, *Shu Min Wong*, China.

THE ORATORICAL PRIZE, for the Annual Inter-Literary Society Contest, February 22, 1916: *Lovick Pierce Hodnette*, Macon, County.

SOPHOMORE MEDAL, Best Debater, 1916: *William Herman Withington*, Jefferson County.

FRESHMAN MEDAL IN DECLAMATION for Annual contest, May 1st, 1916: *Charles Clinton Seed*, Hale County.

PRIZE FOR BEST DEBATER, a medal given annually by the Board of Trustees to the best debater in the Wirt and Websterian Literary Societies each. 1916: Wirt—*Armstrong Cory*, Jefferson County; Websterian—*Edmund Mitchell Manning*, Chilton County.

BEST DECLAIMER IN LITERARY SOCIETIES, 1916: Wirt—*Armstrong Cory*, Jefferson County; Websterian—*Verner Cyril Hanna*, Mississippi.

REGIMENTAL MEDAL, for the best drilled soldier, 1916: *Yetta Glenn Samford*, Montgomery County.

MUSIC MEDAL, 1916: *Francis Marion Taylor*, Lee County.

PRIZE FOR BEST DRILLED COMPANY, a sword given by Board

of Trustees. 1916: *Arnold Edmund Hayes*, Jefferson County.

THE R. W. BURTON PRIZE, for excellence in architectural drawing, *William Wadsworth Wood*, Jefferson County.

LIBRARY.

LIBRARIAN, JAMES R. RUTLAND.

ASSISTANT LIBRARIAN, MISS MARY MARTIN.

The beautiful Carnegie Library building is constructed of stone and pressed brick. The reading room is 80 x 40 feet, and the building is equipped with every convenience. It is lighted by electricity and heated by steam. The capacity of the stack room is sixty thousand volumes. The library now contains 28,800 volumes, including valuable reference and scientific books, with select editions of standard authors, and others suitable for students, carefully and recently selected. It is kept open eight hours daily for the use of students as a reading room and is thus made an important educational feature.

THE O. D. SMITH COLLECTION.

The library of the late Prof. O. D. Smith has been presented to the college by Mrs. O. D. Smith, and is preserved as a memorial to his long and distinguished services to the college.

THE F. D. PEABODY MEMORIAL ROOM.

Through the generosity of Mr. George Foster Peabody, New York City, an annual fund of fifty dollars, income from a permanent investment, is available for the purchase of books and furniture for the "F. D. Peabody Memorial Historical Seminary." F. D. Peabody, Esq., was a distinguished graduate of the Class of 1876.

THE W. D. TAYLOR MEMORIAL COLLECTION.

The engineering library of the late W. D. Taylor, chief engineer of the Chicago and Alton Railway, was bequeathed by him to the Alabama Polytechnic Institute, and is preserved by the College as a memorial to this distinguished alumnus. Mr. Taylor was a graduate of the Class of '81, and was regarded as one of the leading civil engineers of the United States.

MUSEUM.

The Mesuem occupies a large room in the third story of the Main Building. It is provided with suitable cases, and is equipped with valuable specimens and models of an instructive character.

UNIFORMS.

A uniform of cadet gray cloth is prescribed, which all undergraduate students are required to wear during the session. The uniforms are made by a contractor, and are of excellent cloth, manufactured at the Charlottesville mill. A suit, includ-

ing cap, costs at present \$19.00. It is neat and serviceable, and less expensive than ordinary clothing.

LABORATORY FEES.

Each student in the following courses is required to pay the laboratory fee specified:

Chemical laboratory	\$ 5.00
Pharmacy laboratory	5.00
Electrical engineering laboratory	5.00
Mechanical engineering laboratory	5.00
Veterinary medicine (dissecting fee)	10.00
Dairy laboratory	3.00
Soils laboratory	3.00
Horticultural laboratory	1.00
Botanical laboratory	1.50 to 2.50
Civil engineering (surveying)	1.00
Civil engineering (road materials laboratory)	1.00
Civil engineering (summer camp, including board)	18.00
Entomology	1.00
Zoology	1.00

Special students in laboratory work will pay additional fees for each separate division of work, and will be charged with all material consumed in experiments.

CONTINGENT FEE.

A contingent fee of \$2.50 is required to be deposited by each student on matriculation to cover any special or general damage to college property for which he may be liable. General damages are assessed on the body of students.

At the close of the session, the whole of the contingent fee or the unexpended balance, is refunded to the student.

FUNDS OF STUDENTS.

Parents or guardians are advised to deposit with the treasurer of the college all funds desired for sons or wards, whether for regular charges, college fees or board or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands, and to pay all expenses incurred by the students, including board, uniform, books, etc.

The college cannot be held responsible for the expenses of a student unless the funds are deposited under specific instructions from the parent or guardian to the treasurer. No student should be permitted to have a large amount of pocket money, as it brings only trouble, and encourages idleness.

NON-RESIDENT STUDENTS.

Tuition for students not residents of Alabama is \$20.00 per session, unless remitted by the trustees to worthy students upon the recommendation of the faculty.

The remission of this tuition fee to non-resident students will be granted in the form of a free scholarship for the succeeding year to those who obtain a distinction the preceding year, or who, by reason of merit, are deemed worthy.

The following non-resident students were granted, each by reason of special merit in conduct and scholarship during the session of 1915-1916 an honor scholarship, which exempted from tuition fees:

William Wallace Allen	Florida
William Lee Blanton	Florida
William Arnold Guess	Mississippi
Lewis Miller Hall, Jr.	Tennessee
Verner Cyril Hanna	Mississippi
Fredrick Jolley Matthews	Georgia
Christopher Murray	Tennessee
Frank Wilson Parker	Kentucky
Alan Benjamin Pimm	Florida
Everett Roberts	Tennessee
Wilbur Thomas Shinholser	Georgia
Horace Arthur Smith	Mississippi
John Patrick Sullivan	South Carolina
Lamar Mims Ware	Georgia
Shu Min Wong	China

EXPENSES.

There is no charge for tuition for a resident of Alabama.

Board, including lodging, fuel, and lights, is furnished at \$14.00 to \$20.00 per month.

By special arrangements with the college authorities, Mrs. M. M. O'Neal and Mr. B. T. Blasingame will accommodate students with board and lodging for \$14.50 per month.

For non-residents of the State, there is a charge of tuition of \$20.00 per session, payable on matriculation, in addition to the annual fees payable by all students. A student once entering as a non-resident will not be permitted to claim residence unless his parent or guardian becomes a resident or tax payer on property in Alabama. Tuition for non-residents is remitted to sons of ministers of the Gospel.

AMOUNT OF DEPOSIT.

All fees, including laboratory fees are payable on matriculation. *By order of the Trustees a matriculation fee of \$12.00 is retained from deposits of students who withdraw. To students who withdraw after one month's residence in college only the remainder of the laundry fee and the contingent fee, less charges, may be returned; no laboratory fee may be returned; after the beginning of the third term only the contingent fee may be returned.*

Fees to be paid on entrance:

Incidental -----	\$ 5.00	
Library -----	2.00	
Surgeon -----	5.00	
Contingent -----	2.50	
Athletic -----	6.00	
Uniform -----	19.00	
Laundry fee for session -----	12.50	
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For a resident of Alabama -----	\$52.00	\$52.00
Tuition non-resident -----		20.00
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For a non-resident -----		\$72.00

THESIS.

Each applicant for a degree is required to write and submit to the faculty a thesis, or oration and read or deliver the same at Commencement, if required by the faculty.

There may be presented with the approval of the professor in charge, a carefully written report of special work done in a laboratory, showing independent investigation and discussion of some subject.

It must be given to the professor by the first of May. The subject must be submitted for approval by January 1st.

SURGEON.

The Surgeon is required to be present at the college daily, to visit at their quarters the cadets that are reported sick, and give all requisite medical attention without other charge than the regular surgeon's fee, paid on entering the Institute.

An infirmary has been established, and is properly equipped.

LOCATION.

The Institute is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railway of Alabama.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty-six feet above tidewater. By statute of the State the sale of spirituous liquors and the keeping of saloons of any kind are forbidden.

ACADEMIC YEAR.

The academic year for 1917-1918 commences on Wednesday, September 12, 1917, and ends on Tuesday, June 11, 1918, which is Commencement Day.

It is divided into three terms: The first term extends from the opening of the session to December 20th; the second term begins January 2nd, and ends March 25th; the third term continues to the end of the session.

REGISTER

MILITARY ORGANIZATION

SESSION 1916-17

President

CHARLES C. THACH

Commandant

CAPTAIN FRANK W. ROWELL, U. S. Infantry,
with rank of Colonel

Surgeon

J. H. DRAKE

Bandmaster

MAJOR A. L. THOMAS

Regimental Staff.

Cadet Captain E. L. Deal, Adjutant.

Cadet Captain L. M. Ware, Supply Officer.

Regimental Non-Commissioned Staff.

Cadet Sergeant W. W. Allen, Sergeant Major.

Cadet Sergeant J. H. Hamilton, Quartermaster Sergeant.

Cadet Sergeant A. J. Kirby, Color Sergeant.

Cadet Sergeant R. E. Davis, Color Sergeant.

Cadet Sergeant W. C. McKay, Drum Major.

First Battalion.

Cadet Major W. T. Shinholser.

Cadet First Lieutenant W. R. Lassiter, Adjutant.

Cadet Sergeant J. A. Strozier, Battalion Sergeant Major.

Cadet Captains.

Company A
G. R. Bowling

Company B
P. A. Terrell

Company C.
R. H. Thach

Company D
H. P. Sparkes

Cadet First Lieutenants.

L. L. Turley

P. W. Matthews

G. A. Kaufmann

F. H. Prendergast

Cadet Second Lieutenants.

G. O. Burns

H. W. Thomason

Cadet First Sergeants.

J. H. Witherington

O. H. Schultz

W. S. Black

W. A. Guess

Cadet Sergeants.

B. A. Storey
J. T. Hudson
W. C. Hearn
C. B. Crow

J. B. Mayes
O. N. Massengale
G. B. Hawthorne
J. M. Sparrow

J. A. Peterson
W. L. Liddell
E. O. Duffey

W. C. Sills
J. S. N. Davis
L. H. Heyman
G. C. Williams

Cadet Corporals.

R. H. Turner	W. D. Kimbrough	R. S. Reed	S. A. Allen
G. A. Wright	J. W. Pruett	A. Cory	E. A. Caldwell
T. B. Chambers	C. S. Peter	E. E. Terry	F. A. Walker
E. B. Crawford	J. M. Fullan	J. P. Sullivan	A. P. McIntosh
L. E. Tisdale	C. J. Christian	H. T. Killingsworth	W. C. Edwards
E. F. Pollard	E. Collier	C. J. Murray	A. F. Alsobrook
E. C. Easter	W. L. Holmes	N. B. Sullivan	J. E. Howell
	P. W. Pelts		

Second Battalion.

Cadet Major H. M. Lewis.

Cadet First Lieutenant F. K. Simmons, Adjutant.

Cadet Sergeant W. H. Withington, Battalion Sergeant Major.

Cadet Captains.

Company E	Company F	Company G	Company H
J. P. Shaffer	R. M. House	J. C. Powell	J. M. Ward

Cadet First Lieutenants.

A. B. Pimm	R. G. Carpenter	G. E. Weber	W. L. Blanton
	A. H. Dumas		

Cadet Second Lieutenants.

J. H. Scott		H. H. House
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Cadet First Sergeants.

J. T. Fowler	W. W. Sullivan	O. L. Martin	E. E. Ruffin
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Cadet Sergeants.

J. C. Ard	C. E. Snead	R. T. Kanahan	S. B. Hooper
J. H. Martin	G. L. Burleson	Y. A. Elizondo	D. B. VanPelt
S. W. Hill	B. H. Brown	G. E. Burgin	T. A. Sims
E. V. Frederick	L. L. Self	J. R. Nesbitt	J. A. Shealy

Cadet Corporals.

S. J. Nadler	G. W. Duncan	V. C. Hanna	C. T. Tucker
R. C. Bradford	G. K. Miller	F. J. Matthews	J. Thomas
J. H. Drake	P. Frederick	R. L. Sparkman	C. H. Adams
J. P. Fuller	N. D. Spann	W. H. Mobley	F. H. Cutts
D. O. McCord	W. H. Blake	J. W. Tidmore	J. M. Hall
W. R. Hall	J. R. Jackson	W. A. Pipkin	S. C. Phillips
J. M. Rainer	E. C. Johnson	A. A. Smith	
		M. D. Sanders	

THE CADET BAND

Session 1916-17

A. L. THOMAS, Bandmaster

Military Officers

J. M. Kelly	-----	Captain
A. L. Scarbrough	-----	Lieutenant
J. A. Douglas	-----	Lieutenant
W. C. McKay	-----	Sergeant and Drum Major
R. R. McAdory	-----	Sergeant
L. G. Duggar	-----	Corporal
C. M. Hurt	-----	Corporal

Musicians

Cornets

T. M. Brannon
J. Memoli
L. G. Duggar
M. E. Lasater
E. W. Freeman
A. M. Dowling

Altos

J. M. Kelly
M. B. Roberts
A. T. Levie
R. L. Webb

Baritones

W. M. Stewart
W. E. Conger
U. V. Whipple

Flute and Piccolo

J. A. Douglas

Bass Tubas

G. A. Mattison
R. L. Stevens

Clarinets

E. Hargis
A. L. Scarbrough
R. R. McAdory
R. S. Allen
M. A. Martin
H. Urdong

Saxophones

M. G. Crosthwait
J. D. Foster
G. B. Warren
E. B. Crawford

Trombones

R. P. Simmons
J. W. Hutto
G. M. Humphries
N. Ford

Oboe

M. Greenburg

Drums

F. K. Nesbitt
C. M. Hurt

Cadets of the graduating class who were reported to the Adjutant General, U. S. Army, as having ranked highest in the Military Department:

1889	1891	1893
A. St. C. Dunstan	L. E. Baker	Joel Dumas
B. H. Crenshaw	C. C. Johnson	C. H. Smith
A. J. Burr	F. J. Bivins	J. F. Webb
1890	1892	1894
F. D. Milstead	H. F. Dobbin	C. S. Andrews
J. W. Bivins	A. L. Jones	P. P. McKeown
G. W. Emory	C. L. Brown	R. L. Dorsey

1895

S. L. Coleman
H. H. Smith
L. B. Gammon

1896

A. L. Alexander
W. L. Fleming
W. M. Williams

1897

P. G. Clark
G. M. Holley
G. N. Mitcham

1898

A. H. Clark
A. McB. Ransom
John Haralson

1899

I. F. McDonnell
A. H. Feagin
T. W. Wert

1900

E. M. Mason
H. P. Powell
C. W. Nixon

1901

A. F. Jackson
J. D. Foy
P. S. Haley

1902

W. D. Willis
J. E. D. Yonge
J. B. Garber

1903

H. E. Davis
H. M. Yonge
T. J. Dowdell

1904

J. McDuffie
B. L. Shi
Geo. Dunglinson, Jr.

1905

R. P. Boyd
R. H. McCulloh, Jr.
J. H. Paterson

1906

W. H. Foy
F. H. Mohns
M. A. Frazer

1907

N. B. McLeod
W. L. Perdue
G. F. Lipscomb

1908

S. A. Ellsberry
C. M. Howard
R. H. Liddell

1909

J. W. Powell
S. H. Richardson
T. Beasley

1910

D. M. Clements
C. C. Yonge
J. M. Spearman

1911

J. E. Davis
J. J. Cater
G. Lothrop

1912

S. R. Cruse
C. C. Thach, Jr.
F. L. Jenkins

1913

R. A. McGinty
D. L. Taylor
H. C. Hanlin

1914

R. E. Herring
W. B. Tisdale
E. F. Barry

1915

D. D. Gibson
C. A. Donehoo
W. F. Littleton

1916

E. W. Smith
C. E. Newman
A. E. Hayes

GRADUATES

CLASS OF 1916.

HONORS.

Members of the Senior Class who attain distinction with a grade of 95 per cent, are graduates with Highest Honor. Those who attain a distinction with a grade of 90 per cent, and less than 95, are Graduates with Honor. Those who attain less than 90 per cent, and more than 60 per cent, are Graduates.

DEGREES.

BACHELOR OF SCIENCE.

GRADUATES.

John Gill Anderson	Tennessee
John Dunklin Ashcraft	Lauderdale
John Tonice Belue	Lauderdale
Wyly McGehee Billing	Montgomery
Herman West Bingham	Madison
James Rosby Brown	Florida
Joseph Davenport Browne, Jr.	Tennessee
Walter Frederick Bulla	Georgia
James William Burgin	Jefferson
Robert Emmett Cammack	Clarke
John Hosmer Campbell	Clay
Robert Ezekiel Campbell	Sumter
Wilmer Huxley Carter	Florida
Kenneth Gladstone Caughman	South Carolina
Thomas William Clift	Madison
George Roy Corcoran	Russell
William Davis Crawford	Macon
Samuel Neil Crosby	Baldwin
Richard Henry Cunningham	Choctaw
William Velpeau Curtis	Lee
Berrien Walker Davis	Georgia
William Reese Dillard	Georgia
Vernon James Douglass	Jefferson
David Merrick Dowdell	Lee
Perry Jackson Edwards	Morgan
Harry Gordon Farris	Etowah
John Wilbur Freeman, Jr.	Georgia
Roland Macon Fricke	Marshall
Edward Samuel Gatchell	Lee
Werter Shipp Hackworth	Jackson
Frederick Hollis Haynie	Lee
Montgomery Lamar Howe	Lee
Andrew Orestes Jackson	Pike
Glen David Liddell	Wilcox
Robert Forney Middleton	Etowah
George Augustus Miller, Jr.	Florida
William Thomas Mills	Jefferson
James Caldwell Mohns	Jefferson
John Daniel Moore	Bullock
Sarah Evelyn Moore	Lee

Paul Sioussat McCormick	Mobile
Laurrie Artemus McCranie	Florida
Alva Pinkston McCrary	Georgia
Clifford Braswell McManus	Georgia
Lucius Rives Owsley	Elmore
Woodie James Pace	Calhoun
William Charles Payne, Jr.	Tennessee
Joseph Bancroft Perry	Jefferson
Wilton Burton Persons	Montgomery
George Arthur Pfaffmann	Lee
Frank Poole	Butler
Myrt Warren Pouncey	Escambia
Osie Clyde Prather	Lee
Thomas Christopher Rives	Montgomery
James Thomas Roberts	Marshall
Otto Meinhardt Schomburg	Georgia
Ernest Slager	Tennessee
George Roysce Smith	Geneva
Percy Reynolds Smith	Jefferson
George Henry Stewart	Coosa
Carl Laten Stuckey	Mississippi
Francis Marion Taylor	Lee
John Ewing Taylor	Butler
Junie Marcus Thomason	Lamar
Edward LeRoy Tuttle	Houston
Edwin Adolphus Wagner	Texas
Russell Fleming Walthour, Jr.	Lee
George Lawrence Washington	Cuba
James Davis Williford	Lee
William Wadsworth Wood	Jefferson
John Garland Woodall	Jackson
Oliver Eubert Young	Choctaw
Michael Vernon Zimmerman	Jefferson

GRADUATES WITH HONOR.

James Warren Andrews	Montgomery
Hayne Coker Appleton	DeKalb
Richmond Young Bailey	Chambers
William Alexander Burns, Jr.	Talladega
Lee Irwin Davis	Mobile
Posey Oliver Davis	Limestone
Robert Dennis	Pike
Ambrose Camp Duggar	Lee
Arnold Edmund Hayes	Jefferson
Edmund Mitchell Manning	Chilton
Claude Mortimer McCall	Escambia
Emile Nelson	Mobile
James Goggins Peterson	Coosa
Frederick Gordon Sholes	Jefferson
Edward Ward Smith	Lee
Samuel Andrew Wingard	Montgomery

GRADUATES WITH HIGHEST HONOR.

Herbert Lee Evans	Hale
Henry Lord Page King	Georgia
George Lampros	Montgomery
Cyrus Edson Newman	Coosa
Louis Truitt Wells	Pickens
Jesse Jay Williams	Clarke

GRADUATES IN PHARMACY (PH. G.)

GRADUATES.

John Robert Argo	Coosa
Preston Holcomb Cannady	Clarke
Troy Lawless Carter	Perry
Jeffries Nathaniel Dubberly	Lee
Merritt Knight	Wilcox
Albert Young Masters	St. Clair
John Elijah Norman	Lowndes

GRADUATE WITH HONOR.

Osie Columbus LaGrone	Dallas
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PHARMACEUTICAL CHEMIST (PH. C.)

Homer Samuel Gentry	Bibb
Thomas Richard Nash	Shelby

GRADUATES IN VETERINARY MEDICINE (D. V. M.)

Charles Ray Adams	Clarke
Roy Avant	Coosa
Joseph Roland Ballow	Marengo
James Wyatt Boyleston	South Carolina
George L. Breeden, Jr.	Dallas
Ernest Will Bryan	Lee
Forrest Eugene Butler	Crenshaw
Irwin Roland Cooper	Marengo
Archie Lee Faulk	Geneva
Legrand Jones Hargett	Lee
George Douglas Ingram	Lee
Burrell M. Johnson	Marengo
Alto Lee Johnson	Pike
Benjamin Franklin Jones	Wilcox
Joseph Ernest Kendrick	Dallas
Edwin Doc King, Jr.	Wilcox
Samuel Jones Rayfield	Coosa
Richard Kinion Roberson	St. Clair
Walter Stancel Robertson	Tennessee
Willis Charles Roycroft	Mobile
George Ellis Taylor	Jefferson
Thomas Mitchell White	Fayette
Edgar Eldred Williams	Elmore

POST GRADUATE DEGREES.

MASTER OF SCIENCE.

Samuel Faucett Anders	Tuscaloosa
William Emmett Ayres	Lamar
Jackson Frederick Bazemore	Coosa
Frances Alexander Duncan	Lee
Arturo Enrique Elizondo	Mexico
Benjamin Ellsworth Evans	Lee
James Baxter Jackson	Lee
Robert Brice Johnston	South Carolina
Lee Eugene Kimball	Lee
Edmund Clark Leach	Tallapoosa
Herbert Marshall Martin	Florida
Carl Dent Montgomery	West Virginia
Emery Tyler Motley	Randolph
Pierce R. V. Pettis	Clarke
Frances Victoria Steele	Lee

Hassie Earl Terrell	Lee
Homer Bernard Tisdale	Conecuh
Wilton Wendell Webb	Lee
Felix Branyon White	Marion

PROFESSIONAL DEGREES IN COURSE.

CIVIL ENGINEER.

Clyde Augustus Donehoo	Blount
Joel Phillip Melvin	Tennessee

ELECTRICAL ENGINEER.

Julius Albert Fincken	South Carolina
David Adolphus Gammage	Barbour
Cosette Woodley Harrison	Montgomery
William Ware Palmer	Lee
Ransom Davis Spann	Montgomery
Albert Weaver	Escambia

MECHANICAL ENGINEER.

Lorenza Daniel Morgan	Dallas
William Lemuel White	Marion
Frank Whitaker Wilmore	Lee

ENGINEER OF MINES.

Charles Hereford Gilmour	Jefferson
George Alston Kellum	Shelby

DEGREES FOR PROFESSIONAL WORK.

CIVIL ENGINEER.

Andrew Johnstone Hawkins	Jefferson
Walter Wier Johnston	Etowah

ELECTRICAL ENGINEER.

Clarence Edward Mohns	Georgia
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MECHANICAL ENGINEER.

Jack Lawrence Orr	Jefferson
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DISTINGUISHED STUDENTS

SESSION 1915-16.

Students who receive a grade of above 90 per cent, and less than 95 in three studies in the Freshman Class, in four in the Sophomore Class, five in the Junior, and in six in the Senior, are distinguished for excellence in scholarship, and are awarded Certificates of Distinction. Those who receive a grade above 95 per cent, are awarded Certificates of Highest Distinction.

FRESHMAN CLASS, DISTINCTION.

Roland Lee Adams.....	Clarke
Roger William Allen.....	Jefferson
Simeon Arthur Allen.....	Shelby
Costa Boone Barker.....	Cleburne
Ollie Clifton Bryan.....	Coffee
Thomas Browning Chambers.....	Limestone
Armstrong Cory.....	Jefferson
Eugene Benson Crawford.....	Macon
James Hodges Drake.....	Lee
Llewellyn Goode Duggar.....	Lee
George Webster Duncan, Jr.....	Lee
James Douglas Foster.....	Lee
John Peyton Fuller, III.....	Madison
Lewis Miller Hall, Jr.....	Tennessee
William Robert Hall.....	Jefferson
William Duke Kimbrough.....	Wilcox
Frederick Jolly Matthews.....	Georgia
Willard Mitford Mobley.....	Jefferson
Bruce William Murray.....	Mobile
Christopher Murray.....	Tennessee
Jefferson William Pruett.....	Coosa
Russell Sage Reed.....	Etowah
Everett Roberts.....	Tennessee
Horace Arthur Smith.....	Mississippi
John Patrick Sullivan.....	South Carolina
Marvin Taylor.....	Marion
Emmett Edwin Terry.....	Madison

HIGHEST DISTINCTION.

Verner Cyril Hanna.....	Mississippi
Solomon Joseph Nadler.....	Etowah
Cyril Theodore Tucker.....	Mobile
Roy Hope Turner.....	Tallapoosa
George Alfonso Wright.....	Lee

SOPHOMORE CLASS, DISTINCTION.

William Wallace Allen.....	Florida
Linney Leonidas Childree.....	Dale
James Thomas Fowler, Jr.....	Houston
William Arnold Guess.....	Mississippi
Robert Lapsley.....	Dallas
Oliver Norfleet Massengale.....	Elmore

Otto Henry Schultz, Jr.	Jefferson
Laura Watt	Lee
James Henry Witherington	Conecuh
William Herman Withington	Jefferson

JUNIOR CLASS.

DISTINCTION.

William Lee Blanton	Florida
Ernest Linwood Deal	Tuscaloosa
Daniel Andrew Helmich	Jefferson
James Roy Hines	Chambers
Henry Harris House	Etowah
Charles L. Isbell	DeKalb
Alan Benjamin Pimm	Florida
James Frederick Pruett	Russell
Lamar Mims Ware	Georgia
George Egbert Weber, Jr.	Lee
Shu Min Wong	China
Gordon Worley	Tallapoosa

HIGHEST DISTINCTION.

Phares Wood Matthews	Jefferson
Wilbur Thomas Shinholser	Georgia

SPECIAL STUDENTS.

DISTINCTION.

John A. Chancellor	Cherokee
John Hart Fussell	Geneva
Clarence Reuel Hartsock	Mobile
Thomas Maury Leslie	Etowah
John Herbert Murray	Escambia
Edward Penn McGee	Tuscaloosa
Charles George Yarbrough	Monroe

HIGHEST DISTINCTION.

Frank Wilson Parker	Kentucky
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CATALOGUE OF STUDENTS

SESSION 1916-1917.

GRADUATE STUDENTS.

James Warren Andrews	Montgomery
Robert Emmett Cammack	Clarke
Robert Ezekiel Campbell	Sumter
Thomas William Clift	Madison
Lee Irwin Davis	Mobile
Harry Gordon Farris	Etowah
Roland Macon Fricke	Marshall
Edward Gatchell	Lee
Charles Hereford Gilmour	Jefferson
George Lampros	Montgomery
Frank Kitchell Nesbitt	Jefferson
James Goggins Peterson	Coosa
Percy Reynolds Smith	Jefferson
Philip Nicholas Sowell	Escambia
Russell Fleming Walthour, Jr.	Lee
Samuel Andrew Wingard	Montgomery

SENIOR CLASS.

Saul Perry Adelson	Jefferson
Irvin Gravely Ammen	Jefferson
Glenn Andrews, Jr.	Montgomery
William King Askew	Marengo
Thomson William Bailey	Jefferson
Hammond Dudley Baker	Lee
William Watson Barron	South Carolina
Harrison Bates	South Carolina
Carl Lee Beall	Crenshaw
Theodore Russell Benning	Georgia
Walter Gustavus Bevill, Jr.	Hale
William Lee Blanton	Florida
George Randolph Bowling	Tallapoosa
Howard Milton Boyd	Lee
William McClellan Bruce	Wilcox
Cyril Kenneth Bryan	Blount
Frate Bull	Marion
Hugh Otis Burgess	Cleburne
Francis William Burns	Clay
Guy Olney Burns	Lauderdale
Charles Cleveland Bush	Talladega
Hugh William Caffey	Jefferson
Colonel Richard Carnes	Marion
Roy Gatman Carpenter	Marion
Abner Boone Chapman	Covington
James Arthur Chappell	Jefferson
Fred Victor Cluis	Georgia
William Worth Corcoran	Russell
Mary Glenn Crenshaw	Lee
Ernest Linwood Deal	Tuscaloosa
Lewis Battle Dean	Tallapoosa
Leo Donovan	Dallas
John Andrew Douglas	Mobile
Albert Hugh Dumas	Lee
Julius Eagle	Dallas

Annalee Edwards	Lee
Harrison Bartow Emerson	Etowah
Seth Jordan Floyd	Lee
Gordon Green Ford	Franklin
Joseph Marshall Foulks	Louisiana
Lorraine Walker Funk	South Carolina
Joseph Best Grimsley	Georgia
Henry Haigler	Jefferson
Daniel Andrew Helmich	Jefferson
Edward Beverly Henry	Lee
James Edwin Hickey, Jr.	Montgomery
James Roy Hines	Chambers
Lovic Pierce Hodnette	Macon
Daniel Webster Hollis	Henry
Henry Harris House	Etowah
Ray Milton House	Calhoun
William John Howard	Montgomery
Charles L. Isbell	Lee
William Jesse Isbell	Lee
William Schloss Jacobs	Georgia
Leon Ledyard Jeffrey	Wilcox
John William Johnston	Blount
Thomas McDonald Jones	Coosa
Thomas Jefferson Jordan	Marshall
George Allard Kaufmann	Louisiana
James Marion Kelly, Jr.	Georgia
Captain Tullis Knight	Barbour
William Robert Lassiter	Lee
Hester Marion Lewis	Bibb
Phares Wood Matthews	Jefferson
George Rufus Mays	Marion
Samuel Douglas Melanson	Louisiana
James Foy Middlebrooks	Barbour
Leslie Bateson McCoy	Escambia
Thomas Turner McLemore	Jefferson
Oscar L. McMurray	Franklin
Lawrence Marvin McRae	Chambers
James Kirk Newell	Tallapoosa
William Wyman Owens	Pike
Alan Benjamin Pimm	Florida
John Carew Powell	Montgomery
Homer Prendergast	Texas
William Thomson Price	Tuscaloosa
Bryan Pritchett	Clarke
James Frederick Pruett	Russell
Dibble Manley Rickenbaker	South Carolina
Walter Hugh Roberts	Baldwin
Joe Posey Robertson	Fayette
Carey Carlisle Robinson	Lee
Atlee Davis Sample	Morgan
Abb Llewellyn Scarbrough	Calhoun
John Hadley Scott	Tennessee
Edward Noble Scoville, Jr.	South Carolina
Harry Berry Seybt	South Carolina
John Parker Shaffer	Tallapoosa
Sylvester Guinn Sharit	Jefferson
Wilbur Thomas Shinholser	Georgia
James Edgar Shotts	Marion
Frank King Simmons	Florida
Augustus Hoke Sloan	South Carolina
Harry Peckham Sparkes	Jefferson

William Augustus Stickney	Calhoun
Eunice Rebecca Stodghill	Lee
Phillip Avary Terrell	Lee
Richard Hartwell Thach	Lee
Herbert Wright Thomason	Lee
John Earle Thomason	Lamar
Ira Asa Thompson	Pike
Henry Philip Trawick	Lee
Lovell Lack Turley	Missouri
Conrad Gray Wall	Jefferson
Alfred Benjamin Walter, Jr.	Louisiana
John Meriwether Ward	Greene
Lamar Mims Ware	Georgia
Charles Spencer Warren	Montgomery
Jesse Jordan Warren	Montgomery
George Egbert Weber, Jr.	Lee
James Wallace Whatley, Jr.	Lee
Wheeler Williams, Jr.	Russell
Shu Min Wong	China
David A. Woodard	Louisiana
Gordon Worley	Tallapoosa
Barbara Wright	Lee

JUNIOR CLASS.

William Wallace Allen	Florida
Jerome Cochran Ard	Dale
James Oliver Avery	Marion
Marion Russell Avery	Franklin
William Henry Avery	Marion
James Arthur Bates	Chambers
Julian Dumas Beard	Choctaw
Walter Steele Black	Limestone
Madison LeRoy Bonner	Clay
Thomas Herbert Bonner	Clay
Jesse Samuel Burbage	Jefferson
George Larkin Burleson	Marion
Ralph Akin Carroll	Lee
Herschel Jackson Daniel	Georgia
John Stephen Neal Davis, Jr.	Georgia
Ralph Emerson Davis	Georgia
Richard Joseph Ducote	Mobile
Elmer Odell Duffey	Jefferson
Yndalcio Andres Elizondo	Mexico
Roy James Ellison	South Carolina
McKendree Heard Floyd	Lee
James Thomas Fowler, Jr.	Houston
James Tarver French	Pike
Benjamin Bradley Fuqua	Lauderdale
William Arnold Guess	Mississippi
Joseph Henry Hamilton	Jefferson
George Boltz Hawthorne	Wilcox
B. H. Haynes, Jr.	Clay
William Caesar Hearn	Macon
Lewis Harris Heyman	Tennessee
Samuel White Hill	North Carolina
Sidney Bowie Hooper	Marshall
James Thomas Hudson, Jr.	Tennessee
Robert Marvin Hudson	Clay
David Charles Jimmerson	Lee
Elizabeth McTyeire Johnson	Lee
Lucius Wiley Johnson	Tuscaloosa

Robert Thomas Kernahan	Colbert
Albert Johnson Kirby	Jackson
Benjamin Terrell Kirby	Georgia
Augustus Theodore Levie	Coosa
Will Lithgow Liddell	Wilcox
James Hunter Martin	Limestone
Oscar LaFayette Martin, Jr.	South Carolina
Oliver Norfleet Massengale	Elmore
James Belser Mayes, Jr.	Georgia
Robert Lee Miller	Walker
Harold Anderson Milliken	Jackson
Richard Rose McAdory	Jefferson
Walter Littleton McArthur	Geneva
William Cook McKay	Montgomery
Olin Coke Newell	Tallapoosa
Ellison Avery Phillips	Clay
William Henry Philpot, Jr.	Macon
Herman Shelby Price	Madison
Henry Leland Reynolds	South Carolina
Herbert Balshaw Rigby	Georgia
Hickman Riley	Coffee
Milton Boyd Roberts	Greene
William Johnston Ross	Calhoun
Emory Echols Ruffin	Shelby
John James Ryan	Tennessee
Otto Henry Schultz, Jr.	Jefferson
John Andrew Shealy	Louisiana
Albert Edward Sheridan	Georgia
William Clem Sills	Wilcox
Robert Paul Simmons	Dale
Thomas Andrew Sims	Walker
John Marion Sparrow	Lee
Jason Weldon Spencer	Florida
William Matthew Stewart	Jefferson
Barckley Augustus Storey	Talladega
Auby Casey Strickland	Lee
John Alan Strozier	Georgia
William Woodward Sullivan, Jr.	South Carolina
James Andrew Thigpen	Lee
William Rufus Turnipseed	Bullock
David Broome VanPelt	Talladega
John Harrison Watson	Lee
Laura Watt	Lee
Gilmore Clark Williams	Cullman
Allen Davidson Williamson	North Carolina
James Henry Witherington	Conecuh
William Herman Withington	Jefferson

SOPHOMORE CLASS.

Charles Harris Adams	Dale
Roger William Allen	Jefferson
Simeon Arthur Allen	Shelby
Adrian Fuller Alsobrook	Chambers
David Lewis Baker	Florida
Costa Boone Barker	Lee
Charles Herschel Bedingfield	Lauderdale
Kline McCageor Bentley	Crenshaw
Wyatt Heflin Blake, Jr.	Colbert
Whitfield Newell Blankenship	Georgia
Helen Blasingame	Lee
Anthony Joseph Bowab	Escambia

Harold Alfred Bowron	Jefferson
Richard Courtlandt Bradford	Cherokee
Thomas Milton Brannon, Jr.	Barbour
George Clyde Brittain	Cherokee
Lyle Brown	Choctaw
Marvin Earl Bryant	Baldwin
Clarence Aldin Buffington	Autauga
Europe A. Caldwell	Jackson
Homer Carder	Jefferson
Colon Eric Carlovitz	Mississippi
Thomas Browning Chambers	Limestone
Linney Leonidas Childree	Dale
Charles Jefferson Christian	Shelby
John Beverly Christian, Jr.	Florida
Eugene Collier	Morgan
William Cook, Jr.	Walker
Armstrong Cory	Jefferson
William Henry Cotton	Georgia
Eugene Benson Crawford	Macon
Marion Graves Crosthwait	Jefferson
Frederick Harder Cutts	Georgia
Robert Floyd Donehoo	Blount
Charles Edwin Doughtie, Jr.	Georgia
James Hodges Drake	Lee
Llewellyn Goode Duggar	Lee
Frederick Myrick Duncan	Georgia
George Webster Duncan, Jr.	Lee
L. B. Dunnigan	Florida
Everette Champie Easter	Limestone
William Correll Edwards	Chilton
James Lawrence Elliott	Shelby
Lemuel Carldon Faulkner	Lamar
James Douglas Foster	Lee
Ernest Vassie Frederick	Marion
Phil Frederick	Georgia
Edwin Wills Freeman	Florida
James Michael Fullan	Lee
John Peyton Fuller, III	Madison
Walter Lamont Garrard	Mississippi
Edmond Peter Garrett, Jr.	Limestone
Euel Howard Gentry	Bibb
James Needham Gilmer	Choctaw
William Francis Godwin	Georgia
John Carey Goodwin	Marshall
Leslie Craig Greene	Georgia
Samuel Earle Greene	Jefferson
Ivy Moore Griffin	Clarke
Paul Stanley Grimes	Georgia
Glynn Hightower Grisham	Jefferson
James Madison Hall, Jr.	Bullock
William Robert Hall	Jefferson
Wayne Willard Hall	DeKalb
Donald Brinton Hammond	Houston
Verner Cyril Hanna	Mississippi
James Edwin Hillhouse	Jefferson
DeWitt Herndon Holder, Jr.	Mississippi
Mayfield Judson Hollingsworth	Pickens
William Louis Holmes	Houston
John Edward Howell	Dale
Charles M. Hurt, Jr.	Tennessee
John Ralph Jackson	Jefferson

Charles McCoy Johnson	Florida
E. C. Johnson	Georgia
Joel Edward Johnson	Geneva
Arthur LaFayette Jones	Calhoun
Charles Alfred Jones, Jr.	Jefferson
Grady Whittle Jones	Escambia
Robert Dawson Jordan	Crenshaw
Archie Monroe Kearley	Monroe
Landon Gaines Kelly	Tennessee
Henry Thomas Killingsworth	Georgia
William Duke Kimbrough	Wilcox
Arthur Armon Lauderdale	Marion
Herman Lee	Bibb
Milton Paul LeGrand	Montgomery
James Otis Lisenby	Houston
William Mem Little	Georgia
George Ernest Lumpkin	Marshall
Merlin Angelo Martin	Mobile
Frederick Jolly Matthews	Georgia
George Augustus Mattison, Jr.	Clay
George Knox Miller	Florida
Willard Mitford Mobley	Jefferson
John Bartow Murphy	Talladega
Minnie Murphy	Macon
Christopher John Murray	Tennessee
Durward Quigley McCord	Marshall
Albert Plant McIntosh	Florida
James Henry McIntosh, Jr.	Franklin
Joseph Harlan McKinstry	Pickens
Forrest Whitlock McMeans	Jefferson
Solomon Joseph Nadler	Etowah
Jule Rembert Nesbitt	Jefferson
Earl Cochran Nichols	Clarke
Philip William Pelts	Mississippi
Marvin Lucian Perdue	Coffee
Capers Jones Perryman	Jefferson
Charles Scudder Peter	Shelby
Sidney Clarke Phillips	Mobile
Wilbur Arnold Pipkin	Florida
Joseph Leever Pitts	Bullock
Elisha Frederick Pollard	Crenshaw
Jefferson William Pruett	Coosa
Joel Marbury Rainer	Bullock
Robert Freitas Redding	Georgia
Russell Sage Reed	Etowah
John Hugh Reynolds	Lee
Silas Clifford Rutland	Georgia
Leon William Segrest	Geneva
Leroy Lafayette Self	Blount
John McElroy Selman	Coosa
Arthur Shaver	Cullman
Charles Martin Shaw	Macon
Alma Smith	Lee
Angus Atkinson Smith	Geneva
Lansing Taylor Smith, Jr.	Calhoun
Curtis E. Snead, Jr.	Etowah
Henry Clay Snellgrove	Marshall
Norman Dantzer Spann	Houston
Roland Lee Sparkman	Jefferson
Charles Hall Speights, Jr.	South Carolina
Cohen Elbert Stapp	Pickens

Alexander Clifton Stewart	Escambia
Thomas Vernon Stinson	Cherokee
Andrew McAdams Stovall, Jr.	Walker
John Braden Suggs	Talladega
John Patrick Sullivan	South Carolina
Nim Belotte Sullivan	South Carolina
Marvin Taylor	Marion
Emmett Edwin Terry	Madison
John Thomas	Marengo
James Wallace Tidmore	Hale
Franklin Osborn Tilton	Geneva
Lionel Earl Tisdale	Florida
Cyril Theodore Tucker	Mobile
Roy Hope Turner	Tallapoosa
Ross Franklin Wadkins	Lee
Glover O'Neal Waits	Covington
Felix Augustus Walker	Russell
Harold Walker	Jefferson
George Elmer Waller	Lee
James Clarence Watson	Geneva
William Benjamin West	Lee
Winston Campbell White	Sumter
Arthur Herbert Williamson	Lowndes
George Alfonso Wright	Lee
George Herbert Wright	Lee

FRESHMAN CLASS.

Henry Clifton Abbott, Jr.	Jefferson
James Harvey Allen	Calhoun
Robert Stanton Allen	Jackson
Charles Carlisle Anderson	Walker
Joseph Popenjoy Bailey	Elmore
John Thomas Baker, Jr.	Pike
Daniel Garland Barnes	Dale
Earl Daniel Bartlett	Clay
Raymond Ruskin Beard	Mobile
Mafus Bird	Marengo
William David Blackwell	Madison
Albro Edison Blake	Lee
Thomas Lyons Bradley	Jefferson
Oma Wesley Bridges	Macon
Francis Brittain	Georgia
George Clay Brown	Lamar
Donald Jerome Bull	South Carolina
Andrew Alonzo Burke	Houston
William Gustus Bynum	Blount
Hamlin Alexander Caldwell	Jackson
Frederick William Calhoun	Jefferson
William Alfred Cammack	Clarke
Howard Hill Camp	Talladega
Mortimer Garnett Cassell, Jr.	Dallas
Noah Winston Caton	Covington
Horace Meldon Chaddick	Tennessee
Raymond Austin Chambers	Limestone
Jerome Chapman	Geneva
Zachariah Christian	Lauderdale
Arthur Bryan Clark	Coffee
George Little Clark	Crenshaw
Edwin Pierce Clyatt	Lee
Clifton Cecil Cobb	Walker
Albert Hamilton Collins	Fayette

James Barfield Coney	Georgia
George S. Cooper, Jr.	Sumter
John Francis Cooper	Tuscaloosa
Benjamin Coplan	Jefferson
Warren Crain	Wilcox
John Paul Creel	Jefferson
Herbert Haynes Crittenden	Macon
Osler Gilbert Crow	St. Clair
Marvin Trowbridge Crymes	South Carolina
Edward Pilate Culpepper	Henry
Thomas Micajah Culpepper	Georgia
William Walter Culver	Houston
Raymond Currey	Marshall
Perry Chisholm Day	Georgia
Richard Buey Deason	Walker
Stuart Hubert Dent	Barbour
John Bealie DeRamus	Chilton
Garvey Dixon Douglas	Walker
Guy Eldo Douglas	Walker
Wilbur Reece Dove	Mississippi
Augus Mancill Dowling	Barbour
John Hodges Drake, Jr.	Lee
Owen Hunter Draper	St. Clair
Wells Roney Draughon	Geneva
Russell Duff	DeKalb
Charles Wesley Edwards	Coffee
Albert Elmore	Marengo
Lester Lamar English	Morgan
Lecil Verland Evans	Lamar
Gordon Farned	Franklin
William Baker Farrar	Georgia
Walter Jerry Fickling	Georgia
Charles Ewell Floyd	Lee
George Foster	Lee
John Thomas Frazer	Chambers
William Williams French, Jr.	Jefferson
Robert Callaway Gaines	Clay
William Thomas Galloway	Madison
Junius Roach Gardner, Jr.	Jefferson
James Erskine Gillespie	Marshall
John Bennett Gipson	Marshall
Leon Bell Gladish	Tennessee
Lewis Gudenrath Goldstein	Madison
Harless Grace	Walker
Charles Merrill Gray	Walker
John Martin Griffin, Jr.	Jefferson
William Horace Griffin	Bibb
Alfred Flournoy Griggs	North Carolina
William Elmer Grimsley	Escambia
Isham Belle Gunter	Lee
Lindsey Jesse Gunter	Lee
Andrew Byron Hall	DeKalb
Jesse Pankey Hall	Etowah
Wallace Howard Hall	Montgomery
William Stephenson Halsey	Colbert
John Garmon Hamilton	Franklin
Joseph Langhorne Hammond	Etowah
James Arnold Harmon	Chambers
Sidney Guenveur Harper	Montgomery
Crishull Charles Harrison	Florida
Ernest Harvey	Montgomery

Vester Maxwell Hasson	Tuscaloosa
Arthur Lee Hayley	Walker
Oliver Ripley Head	Shelby
Clifford Pinkney Hendricks	Blount
Elmer High	Chambers
Hoyt Grady Hodge	Randolph
Orville Butler Hodges	Madison
Joseph Kyle Holley	Elmore
Simeon Wirt Hooper	Marshall
John Monroe Howarth	Chambers
Milton Oliver Howle	Jefferson
Frank Hughes	Jefferson
George McGowin Humphries	Baldwin
Edward Ray Hurn	Lauderdale
Joseph Theodore Hury, Jr.	Jefferson
Erastus Winom Ingle	Blount
Robert Little Irwin	Montgomery
John Irwin Jackson	Henry
Edward Clare Jacob	Dallas
Clint Jacobs	Coosa
Dwight Lamar Moody James	Mississippi
Reuben Jarrell Jennings	Chambers
Jerry Leslie Jimmerson	Lee
Elizabeth Pearle Johnson	Lee
Ralph Duncan Johnson	Geneva
Richard Malcolm Johnston	Jefferson
Patrick Burrus Jones	Georgia
Sidney Bradford Jones, Jr.	Colbert
Joseph Benjamin Kantor	Jefferson
Hanson Stakely Keller	Jefferson
John Simmons Kernachan, Jr.	Lauderdale
James Homer Killebrew	Calhoun
John King	Lee
Joseph Carl Kingsbery	Georgia
Joseph Hardin Kirby	Colbert
Bryan Edwards Kirven	Lee
Robert Arthur Kohloss, Jr.	North Carolina
George Barnes Komp, Jr.	Mississippi
Merwin Turner Koonce	Lauderdale
Melton Winship Kyser	Elmore
Edwin Bragg Lancaster	Sumter
Colquitt Hill Lane	Lee
Matthew Lawson	Montgomery
Howard Stuart Leach	Montgomery
Thomas Benjamin Lee	Barbour
Frank Underwood Leonard	Jefferson
Wallace Henry Lindsey, Jr.	Choctaw
Albert Shelton Lisenby	Houston
Peyton Brantley Little	Georgia
John Burrow Looney	Jefferson
George Thomas Lowe	Georgia
Fountain Alexander Maddox	St. Clair
Alfred Shelby Martin	Jefferson
Thomas Holland Massey	Georgia
James Fountaine Maury, Jr.	Mobile
Archie Vernon Meigs	Clay
Janssens Joseph Melancon	Louisiana
Amos Bender Miller	Cullman
Joachim Perreurt Milligan	Covington
William Emery Miner	Mississippi
Jacob Robert Moon	Coosa

Francis Cecil Morere	Mobile
Frank Stewart Morgan	Dallas
Jane Warren Morris	Lee
Walter Gilliam Murdock	Jefferson
Hubert LaFayette McCain	Clay
Edward Simeon McCree	Tallapoosa
William Harvey McEachern	Barbour
Alfred Cameron McIsaac	Tennessee
Jesse Numan McLane	Florida
Ellie LaFayette Nelson	Marshall
Oscar Albin Nelson	Jefferson
William Gamble Nethery	Limestone
James McCarty Oliver	Walker
James Cornelius O'Neal	Mobile
Koy John Orr	Chambers
Robert Homer Orr	Chambers
Winfield Scott Owsley	Wetumpka
Frank Page	Houston
Bledsoe Payne	Chambers
Gerald Walstein Pearson	Georgia
William Beatty Pearson	Hale
James Byrd Pilcher	Houston
James Henry Pirkle	Georgia
David Pogue	Clarke
Ernest Eugene Price	Talladega
Walter Clyde Raley	Shelby
Edward Hunt Ray	Perry
Grover Washington Ray	Tallapoosa
Robert Presly Rebman	Lawrence
Henry George Redding	Georgia
George Daly Revington, Jr.	Tennessee
Adam Olin Riser, Jr.	Jefferson
James Alexander Robbins	Covington
Amos Dalton Roberts	Fayette
Robert Clyde Rogers	Escambia
Lee Henry Rogge	Louisiana
Edward Lee Ruff	Macon
Richard Olney Russell	Morgan
James Drake Samford	Montgomery
William James Samford	Lee
William Hardin Saunders	Tennessee
James Ash Scoggins	St. Clair
John Phillip Shealy	Houston
Samuel Shepherd	Walker
Claude Sizemore	Fayette
Emmett Sizemore	Fayette
John Cooper Slone	Morgan
Ernest Gustave Small	Dallas
Charles Linton Smith	Fayette
LaFayette Cooper Smith	Chambers
Mirah Raymond Smith	Bibb
Thomas Poland Smith	Texas
Lawrence Cavell Sparkes	Mississippi
Ewart Andrew Spear	Clay
LaRue Spence	Georgia
Edward Jacobs Stallings	Georgia
James Henry Standridge	Blount
William Richmond Stephens	Lee
Reubin Leslie Stevens	Chambers
Edgar Strong	Jefferson
Francis Seaborn Stubbs	Georgia

Dana Gibson Sturkie	Lee
Jack Tamblyn	Jefferson
Edgar Cecil Taylor	Crenshaw
Joe Thomas	Tallapoosa
Paul Isaac Thomas	Marengo
Fletcher Thorington	Montgomery
Robert Patrick Thornton	Lee
Edward Hafford Todd	Jefferson
James Bennett Townsend	South Carolina
John Herman Trapp	Mississippi
Joseph Pierce Trotter	Baldwin
Himan Urdong	Jefferson
Erskine Vandegrift	St. Clair
Robert James Varner	Lee
Lewis Chandler Vaughn	Georgia
John Virgil Waits	Georgia
Young Wall (Irregular Course)	Limestone
Butler Warren	Morgan
Chester Clyde Warren	St. Clair
Lynn Casey Watson	Jefferson
Robert Leon Webb	Georgia
Carl Eric Wideberg, Jr.	New Jersey
Harry DeLos Williamson	Tennessee
Clyde English Wilson	Walker
John Bonard Wilson	Marshall
William Patrick Wilson	Mississippi
Edmund Jackson Winslett	Tallapoosa
Raymond Wood	Baldwin
Aaron Montgomery Woodall	St. Clair
Arthur Paschal Woodfin	Perry
Leonard Rudolph Wright	Georgia
Alfred Irvin Young	Georgia
Calvin Locke Young	Texas
John Guinn Young	Georgia

TWO-YEAR COURSE IN AGRICULTURE.

SECOND YEAR.

Joel Richard Abney	South Carolina
Wallace Boaz, Jr.	Talladega
John A. Chancellor	Cherokee
Vivian Pendleton Gaines, Jr.	Mobile
William Skeggs Johnston	Morgan
Joseph Walsh Matthews	Mobile
Frank Wilson Parker	Kentucky
Frederick Crones Partridge	Mobile
Thomas Laydon Pierce	Barbour
Malcolm Floyd Smith	Autauga
William Alberto Stiles	Jefferson
Tilghman Anderson Turner	Jefferson
Edward R. Wren	Talladega

FIRST YEAR.

Edward Fulmer Armstrong	Jackson
James McDowell Baker	Talladega
Malory LaFoy Batson	Jefferson
Arthur Clayborn Cadenhead	Lee
Archibald Roane Callen	Dallas
Frederick Carl Cannon	Georgia
John Hunter Carr	Mississippi
Elmer Rice Chambliss	Autauga

Herman Leslie Childs	Geneva
Joseph Green Coleman	Sumter
Charles Dixon	Escambia
Charles Leon Garner	Geneva
Roney Grasse	Limestone
Harold Watts Grimes	Wilcox
David Guthrie	Baldwin
Lamar Cantelou LeBron	Elmore
Robert Lee Martin	Jefferson
Roy Byus Moody	St. Clair
Harry J. Moore	Mobile
Forest Edgar Nichols	Baldwin
William Ernest Oates	Autauga
George Eldridge Owens	Pike
Lewis Joseph Raemon	Jefferson
Lee Ray Roberts	Calhoun
Frank Sanford	Calhoun
William Harper Spencer	Greene
Harry Roy Tamplin	Lee
Harrell Taylor Vance	Talladega
Richard Allen Vinton	Tennessee
James Walker	Texas
Walter Alexander Whatley	Lee

TWO-YEAR COURSE IN APPLIED ELECTRICITY.

SECOND YEAR.

Claude Leland Chester	Georgia
Felix Albartus Coleman	Mobile
Dewey Mattison Ferrell	Greene
Charles Wesley Gantt	Elmore
William Ingram	Georgia
Augus Arthur McIntyre, Jr.	Talladega
Richard Daniel Stevens	Madison
Samuel Jones Tankersley	Georgia
Cecil Worth Thompson	Randolph

FIRST YEAR.

Curtis Bryan Avery	Chambers
Ralph Bates	Lowndes
Abraham Charles Berman	Jefferson
Carl Herman Brill	Jefferson
William Ervin Brunson, Jr.	South Carolina
William Harrison Bussell	Georgia
Golden Cecil Cruise	Autauga
Clinton Jasper Glover	Walker
Horace Harmon Glover	Jefferson
Maurice Greenberg	Jefferson
Frank Thomas Hicks	Georgia
Lucian Hill	Pickens
James Otis House	Clay
Griffin Theobald Key, Jr.	Montgomery
Clarence Linwood Manning	Covington
Joseph Memoli	Jefferson
Erasmus Lewis Miller	Covington
Fletcher Whitfield Powers	Lee
Foy Shultz	Pike
John Bruce Snider	Jefferson
Charles Max Soboika	Morgan
John Edward Stewart	Bibb

TWO-YEAR COURSE IN MECHANIC ARTS.

John Joseph Beggs	Jefferson
Desmond Crain	Wilcox
William Henry Kettig, Jr.	Jefferson
Frank Morgan	Jefferson
Frederick Musgrove	Marion
William Randolph Palmer	Georgia
William Earl Shinn	Talladega
William Henry Stoves	Jefferson
Milton Wesley Thomas	Dallas

IRREGULAR STUDENTS.

Joseph Patrick Allgood	Calhoun
Lehron Ard	Geneva
Edward Yancey Argo	Talladega
Cyrus Andrew Aschraft	Lauderdale
Berta Leon Balch	Macon
Charles Randolph Barksdale, Jr.	Bullock
Clarence Reneau Beutell	Georgia
Mose Bilder	Tennessee
Forest Reynolds Birchfield	Jefferson
John Vivian Blackman	Tuscaloosa
Gill Wyeth Blackshear	Houston
Otis Winfield Britt	Covington
Charles Jacob Brockway, Jr.	Sumter
Brisbane Hanks Brown	Texas
Ollie Clifton Bryan	Coffee
Gurley Everett Burgin	Jefferson
Thomas Henry Burton	Calhoun
Giles Homer Carlovitz	Mississippi
Elwyn Allen Cary	Lee
D. Arnold Caylor, Jr.	Bullock
John Roger Chambliss	Autauga
Jesse Herman Chappell	North Carolina
Joseph Wheeler Clancy	Jefferson
Lucile Meredith Cobb	Macon
Jackson Lowery Collins	Mississippi
William Edmond Conger	Louisiana
Edward Bernard Cooley	Jefferson
Charles Brandon Crow	Walker
Andrew Howell Crull	Jefferson
Berry Cruse	Jefferson
Charles Fairchild DeBardeleben, Jr.	Jefferson
Henry Fairchild DeBardeleben	Jefferson
Edwin Didlake	Jefferson
White Doster	Jefferson
Arthur Maultsby Dowell	Jefferson
William Edward Frawley	Jefferson
Lawrence Tatum Fullington	Etowah
Mrs. John Hart Fussell	Geneva
Upshaw Franklin Gibson	Clay
James Needham Gilmer	Choctaw
Legare Hairston	Marengo
Adolphus Alexander Hale	Sumter
Frank Gurley Hall	Madison
Robert William Hanby	Jefferson
Estes H. Hargis	Jefferson
Walter Elbert Harrell	Lowndes
Ellis Phillip Harris	Jefferson
John Tyler Heflin	Randolph

Mrs. J. E. Henry	Lee
Samuel Robert Huey	Jefferson
John William Hutto	Walker
Milo Barrett Howard	Montgomery
Louis Earl Jenkins	Jefferson
Edwin Harley Jessup	Georgia
Joseph William John	Dallas
Neal Corbly Johnson	Colbert
Madison Jones	Hale
Raymond Boone Kelly	Jefferson
Admiral Dewey Kilgore	Randolph
Howard Cecil Kilpatrick	Jefferson
Cecil Emmette Kimbrough	Marengo
Frazer Westmoreland Kolb	Lee
Howard Lamar, Jr.	Lee
Robert Lapsley	Dallas
Marion Earl Lasater	Jackson
John Bannister Leek	Etowah
Andrew Dowdell Lipscomb	Lee
Frank Corry Lipscomb	Lee
Donald Dupree Lowery	Escambia
Victor Irvin Masters, Jr.	Georgia
Daniel DeVote Monroe	Jefferson
William Oscar Mulkey, Jr.	Geneva
John Herbert Murray	Escambia
Cummings Herrington McCall	Montgomery
William Franklin McLemore	Talladega
James Gay Nall	Jefferson
Robert Nobles	Florida
Byron Yarbrough Pennington	Covington
Julius Albert Peterson	Coosa
Paul Pinckard	Jefferson
Burke Dulain Ponder	Georgia
Louis Rogers Rainey	Talladega
Manuel Gomez Ribeiro	Brazil
James Paul Robinson	Choctaw
James Donald Russell	Calhoun
Carl Sanders	Randolph
Mortimer Dewey Sanders	South Carolina
William Lee Sims	St. Clair
Cornelius Clyde Smith	Lee
Lemuel Bloodworth Standifer	Florida
Willard Lamont Stevens	Mississippi
Arthford Pearson Stough	Montgomery
Homer Theodore Sudduth	Jefferson
J. B. Tabor	Madison
Alexander Ogden Taylor	Florida
John Simpson Tennent	North Carolina
Esther Thompson	Randolph
James Anderson Ward	Georgia
Ulon Victor Wellons	Georgia
Ulysses Virgil Whipple, Jr.	Georgia
John Randolph Whitehead	Georgia
Edward Meade Wilson	Florida
John Stanton Woodson	Walker
Andrew Jackson Wynne	Marengo
John Fletcher Yarbrough	Houston
Ruth Zuber	Lee
Willie Zuber	Lee

DEPARTMENT OF PHARMACY.

FOUR-YEAR COURSE.

SENIOR CLASS.

Howard Milton Boyd	Lee
James Foy Middlebrooks	Barbour
James Kirk Newell	Tallapoosa

JUNIOR CLASS.

William Henry Philpot, Jr.	Macon
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IRREGULAR STUDENTS.

Roland Lee Adams	Clarke
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TWO-YEAR COURSE.

SECOND YEAR.

Leslie Allen Akins	Barbour
Charles Martin Cherry	Houston
Ernest Matkin Dunn	Marengo
James Thomas Farmer	Geneva
Henry Carl Fischer	Cullman
Ellis Grey Griffin	Clarke
Pugh Bryan Harris	Pike
Glover Abraham Johnson	Cherokee
George Lawrence Morris	Crenshaw
Byron Ross McBryde	Geneva
Henry Erskine McNamara	Jefferson
Harden Clavin Reynolds	Lee
Rhett Goode Reynolds	Crenshaw
Carl Vernon Tanner	Mobile
Charles George Yarbrough	Monroe

FIRST YEAR.

Frederick Armstrong	Cullman
Robert Turpen Ashhurst, Jr.	Tallapoosa
Henry Grady Buchanan	Tennessee
John Rufus Evans	Georgia
John Baltzell Hayes	Macon
Robert Andrews Hill	Pickens
Clyde Dallas Hodge	Randolph
Conway John Justice	Autauga
Cecil Emmette Kimbrough	Marengo
Will Cloyde McKee	Georgia
Lee Palmer	Washington
Ford Benson Patterson	Baldwin
Reuben Jackson Plant	Tallapoosa
William Hunter Plott	Pickens
Thomas Simes	Marshall
Milton LeGrand Wood, Jr.	Montgomery

IRREGULAR STUDENTS.

Charles Francis Brannon	Henry
Brack M. Burton	Walker
Jeffries Nathaniel Dubberly	Macon
Arthur Smith	Clay
Malcolm Tyus	Autauga

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

THIRD YEAR.

Dee Lloyd Allen	Sumter
William Elmer Bachelor	Elmore
Daniel Lorenzo Campbell	Marshall
Billy Elza Carlisle	Macon
Hosmer LaFayette Farr	Jefferson
Condie Pugh Gaston	Wilcox
Robert Henry Glenn	South Carolina
Thaddeus Lamar Glenn	South Carolina
Thaddeus Henry Ingram, Jr.	Lee
Byron Newman Lauderdale	Coosa
Harmon King Law	Pike
William Lonnie Parrish	Chilton
Leon Louis Powell	Choctaw
Walter James Schimmel	Jefferson
Edward Hunter Welles	Tennessee

SECOND YEAR.

Carey Linwood Bell	North Carolina
Richard Taylor Compton	Marengo
William Francis Conner	Pickens
William Francis Donahue	Lee
John Hart Fussell	Geneva
Alton R. Gissendanner	Dale
Roy Howard Herron	South Carolina
Allen Jesse Miller	Clarke
William Sumter Reynolds	Pike
Harrison Webb Sloane	Mississippi
William Lee Smith	Jefferson
James Ralph Sullivan	Lee
Fletcher LeRoy Vinson	Lee
Everett Sompoyac Winters	South Carolina

FIRST YEAR.

Frederick Franklin Breithaupt	Wilcox
Neil Ford	Marion
John McKee Gould, Jr.	Greene
Robert Harper Hamner	Pickens
Everette Lee Harper	Pickens
McKenzie Heath	Coffee
Walter Henderson Hines	Monroe
Albert Lee Holloway	Monroe
Robert Russell Jeter	South Carolina
John Bryan Jordan	Pickens
Dorrance D. Major	Mississippi
Bruce William Murray	Mobile
Lonnie B. Nesmith	Blount
John Oliver, Jr.	Mississippi
Clyne Valdez Presley	Butler
James Benett Randall	Baldwin
James Daniel Ratchford	Chambers
Raymond R. Sally	South Carolina
William Russell Stillings	Wilcox
Selman Lamar Threadgill	Dallas
Uriel Vivian Weeks	Marion

IRREGULAR STUDENTS.

Houston Davidson Alexander	Dallas
John Howard Beckham	Hale
Thomas Walter Boman	Cleburne
George Barney Bradshaw	Mississippi
Bloemer Brandon	Pickens
William Posey Claughton	Chilton
Kerr Miller Clements	North Carolina
William Goodall Collins	Georgia
Frank Baury Cook	Choctaw
William Pierce Crawford	Marengo
Turner Mitchel Dennis	Chilton
William Lipscomb Douglas	Marengo
William Asker Fuqua	Barbour
Leonard Johnson Hill	Calhoun
John Mobley Jeter	South Carolina
Judson Jowers	Elmore
Forrest Key	Walker
Guy Edgar Pace	Georgia
Tennent Lamar Payne	Crenshaw
Frank Kirk Peterson	Dallas
Rufus Arnold Roberts	Randolph
George Malcolm Steed	Wilcox
Emmette Beeson Wheeler	Jackson
Frank Wilson	Georgia

SUMMARY.

Graduate Students	16
Senior Class	118
Junior Class	84
Sophomore Class	159
Freshman Class	251
Pharmacy	41
Veterinary Medicine	74
Mechanic Arts	9
Applied Electricity	31
Two-Year Course in Agriculture	44
Irregular Students	107
	934
Deduct for names counted twice	4
Total	930

NUMBER OF STUDENTS IN EACH SUBJECT OF STUDY.

English	676	Chemistry	491
History	513	Agronomy	439
International Law	214	Agr. Engineering	86
Civics	27	Animal Husbandry	497
French	28	Physics	460
German	34	Botany	178
Spanish	72	Entomology	45
Latin	77	Zoology	79
Education	162	Horticulture	183
Political Economy	68	Forestry	40
Mathematics	543	Veterinary Medicine	74
Chemical Laboratory	213	Landscape Gardening	58

Geology	98	Machine Design	103
Civil Engineering	45	Agricultural Drawing	42
Surveying	290	Descriptive Geometry	106
Electrical Engineering	157	Mechanic Arts	525
Mechanical Engineering	241	Mineralogy	17
Mining Engineering	9	Pharmacy	60
Architecture	13	Military Department	800
Mechanical Drawing	303		

RESIDENCE BY STATES.

Alabama	745
Georgia	73
South Carolina	27
Florida	20
Mississippi	20
Tennessee	17
Louisiana	9
North Carolina	8
Texas	5
Kentucky	1
Missouri	1
New Jersey	1
Brazil	1
China	1
Mexico	1

SUMMER SESSION, June 8 to July 19, 1916.

CATALOGUE OF STUDENTS.

- Adams, Roland Lee, Jackson
 Adams, Leonard B., Birmingham
 Addison, Olive, Notasulga
 Adkins, Ernest C., Birmingham
 Alexander, Shirley Fairfax, Prattville
 Allen, Roger, Birmingham
 Allen, Josephine, West Point, Ga.
 Ammen, Irvine, Birmingham
 Anderson, J. G., Clarksville, Tenn.
 Armstrong, Mrs. M. M., Atlanta, Ga.
 Armstrong, Frances, Auburn
 Avery, W. H., Auburn
 Avery, M. R., Auburn
 Avery, Jas. O., Auburn
 Ayres, Dora, Newell
 Baker, D. L., Orange Home, Fla.
 Ballard, Ocyne Agnes, Opelika
 Barker, Ollie, Auburn
 Barker, Costa Boone, Auburn
 Barker, Wyss, Auburn
 Barker, Vida, Auburn
 Barker, Marcus R., Auburn
 Barnes, Mrs. Esther L., Opelika
 Barnes, Perry O., Opelika
 Bates, Harrison, Greenville, S. C.
 Beall, Carl Lee, Luverne
 Beasley, Marye, Auburn
 Berry, Elizabeth W., Mobile
 Bevil, Walter G., Greensboro
 Bickley, Jonathan Taylor, Gainesville
 Billing, W. M., Montgomery
 Birchfield, Bessie, Pyriton
 Birchfield, Alma, Pyriton
 Bird, Mafus, Thomaston
 Blackmon, Josie, Columbus, Ga.
 Blasingame, Edmond L., Auburn
 Blasingame, W. C., Auburn
 Boling, Mrs. Annie P., Eutaw
 Bonner, M. L., Lineville
 Borders, Mrs. Pauline C., Ozark
 Bostick, Roger McIver, Benoit, Miss.
 Bowling, Geo. Randolph, Dadeville
 Boyd, Martha Elizabeth, Auburn
 Boyd, Lucile, Hartford
 Bryan, Howard F. Jr., Tallassee
 Bryan, Ollie Clifton, Elba
 Buchanan, Mrs. A. H., Auburn
 Burbage, Jesse S., Birmingham
 Burgin, J. W., Birmingham
 Burgess, Hugh, Edwardsville
 Burnett, Annie Grace, Camp Hill
 Burnett, Marvin, Altoona
 Burr, Mrs. Mary M., Auburn
 Bush, Charles Cleveland, Childersburg
 Cadenhead, Crecie Mae, Notasulga
 Caldwell, Frances, Scottsboro
 Caldwell, Daisy, Scottsboro
 Cammack, W. A. Faunsdale
 Campbell, John H., Pyriton
 Carlovitz, Giles Homer, Gulf Port, Miss.
 Carnes, Avery, Hamilton
 Carnes, Colonel Richard, Hamilton
 Carter, Wilmer H., Pensacola, Fla.
 Cary, Mrs. C. A., Auburn
 Cauthen, Katie Frances, Auburn
 Cauthen, Mrs. E. F., Auburn
 Chapman, Thos. H., Selma
 Chappell, Jas. A., Ensley
 Cherry, Chas. Martin, Dothan
 Childree, L. L., Grimes
 Childree, Barney, Grimes
 Clay, Emma Ruth, Girard
 Clay, Bertha Lee, Girard
 Colson, Nettie Lou, Midland City
 Coney, James Barfield, Cordele, Ga.
 Corcoran, W. W., Cottonton
 Cox, Mrs. J. A., Auburn
 Crenshaw, Mary Glenn, Auburn
 Crow, Chas. Brandon, Jasper
 Dabbs, Lera P., Camp Hill
 Daniel, Herchel Jackson, Hogansville, Ga.
 Davis, Mamie Ruth, Ramer
 Davis, Laurie, Prattville
 Davis, John Marvin, Birmingham
 DeVore, Ruth, Jemison
 Dickert, Mary, Tennille
 Dickert, Emma, Tennille
 Dillard, W. R., Washington, Ga.
 Dodd, Collie O., Boaz
 Dorman, Verbye, Enterprise
 Doughtie, Chas. E., Columbus, Ga.
 Dowdell, Katherine, Auburn
 Douglas, J. A., Mobile
 Drake, J. H., Opelika
 Drake, Ross, Auburn
 Duggar, L. G., Auburn
 Duggar, Dorothy, Auburn
 Duggar, Frances, Auburn
 Dumas, Mrs. A. C., Auburn
 Duke, Etta Jean, Opelika
 Duncan, Mrs. George W., Auburn
 Dunnigan, L. B., Chicago, Ill.
 Eagle, Julius, Selma
 Easters, Irene, Troy
 Edwards, Anna Lee, Auburn
 Edwards, Glennie Dee, Society Hill
 Farr, Homer LaFayette, Brighton
 Ferris, John C., Augusta, Ga.
 Fleming, Olla, Opp
 Fox, Willie, Montgomery
 Fullan, James M., Auburn
 Fullan, Lysbeth, Auburn
 Fuller, John Peyton, Huntsville
 Funk, L. W., Florence
 Gandy, R. L., Plantersville

- Gibbons, Samuel H., Marbury
 Gray, Bessie, Waynesboro, Miss.
 Grimes, Zelma, Greenville
 Gunter, Lindsey, Opelika
 Gunter, Mittie P., Opelika
 Haigler, Henry, Boyles
 Hall, Wayne Willard, Collinsville
 Hamilton, Mrs. G. W., Auburn
 Hansis, May, Birmingham
 Harden, I. L., Wilsonville
 Harden, Mrs. I. L., Wilsonville
 Hardwick, Lillian Marie, Notasulga
 Hare, Emily, Auburn
 Harris, Elizabeth Blanche, Dothan
 Harris, P. Horace, Stanton
 Hayes, Vergile L., Notasulga
 Hayes, William, Daviston
 Hayes, John B., Notasulga
 Hayley, Arthur Lee, Jr., Nauvoo
 Haynie, Marybell, Auburn
 Head, Jennie E., Mobile
 Head, T. L. Jr., Grove Hill
 Reflin, Vicie, Wedowee
 Helmich, D. A., Birmingham
 Henderson, Annie, Camp Hill
 Henry, Rosa Julia, Auburn
 Henry, Mrs. R. C., Auburn
 Hicks, W. L., Midland City
 Hicks, Mrs. W. L., Midland City
 Hickey, James E. Jr., Atlanta, Ga.
 Hogan, Jesse J., Speigner
 Hollis, Daniel Webster, Headland
 Hollifield, Mollie Hal, Auburn
 Holstun, Hollis Oswald, Camp Hill
 Holstun, J. Tucker, Camp Hill
 House, H. H., Altoona
 Houston, Frank C., Columbia, S. C.
 Howe, Eugenia, Auburn
 Howard, Walter Lucian, Milltown
 Howard, William John, Montgomery
 Hudson, Mrs. J. T., Auburn
 Hughes, B. Ivan, Rockford
 Isbell, W. J., Auburn
 Isbell, Mrs. W. J., Auburn
 Jackson, Mary Frances, Notasulga
 Jacobs, Wm. S., Cuthbert, Ga.
 James, Lillian, Waverly
 Jennings, Reuben Jarrell, West
 Point, Ga.
 Jimmerson, J. L., Opelika
 Jones, Joe, Evergreen
 Johnson, Reuben Lee, Dadeville
 Johnson, Lucius Wiley, Holt
 Johnson, Sydney Walter, Jr.,
 Auburn
 Jordan, Thomas, Union Grove
 Judd, Mrs. Zebulon, Auburn
 Keith, Jno. Moses, Auburn
 Kelly, J. M., Cordele, Ga.
 Kernahan, Robt. Thomas, Sheffield
 Kersey, Pearlle, West Point, Ga.
 Kimball, Lee Eugene, Auburn
 Knapp, Louise, Auburn
 Knight, Tullis, Clio
 Kolb, Frazer W., Auburn
 Kyle, Ponsonby, New Decatur
 Lafon, Norton, Altoona
 Lamar, Howard, Jr., Auburn
 Lamar, Mildred, Auburn
 Lamar, Geo. Glenn, Auburn
 Lane, F. R., Roanoke
 Lane, William, Auburn
 Langley, Vera, Camp Hill
 Langley, Elliott Monroe, Dadeville
 Langley, Mrs. Irene, Dadeville
 Lassiter, Katie, Phoenix
 Lauderdale, Byron N., Kellyton
 Leek, J. B., Gadsden
 Lewis, Hester Marion, Blocton
 Lisenby, James Otis, Dothan
 Lipscomb, Andrew D., Auburn
 Love, Susie, Girard
 Lowrey, Maude, Bay Minette
 Lumpkin, Geo. E., Albertville
 Luttrell, Ruth, Oxford
 Martin, Mrs. C. N., Atlanta, Ga.
 Martin, Mrs. W. D., Auburn
 Matthews, Juliet, Hackleburg
 Mayes, J. B., Bainbridge, Ga.
 McAdory, Mrs. I. S., Auburn
 McCall, Claude Mortimer, Brewton
 McCants, Anne Beall, Demopolis
 McCormick, Paul S., Mobile
 McCrary, A. P., Senoia, Ga.
 McGinty, Oriel, Camp Hill
 McKissac, Imogene, Welsh
 McLeod, Katherine, Troy
 McLeomore, Wm. Franklin, Gantts
 Quarry
 McMeans, Forrest Whitlock, Bir-
 mingham
 Meadors, Lucile, Cusseta
 Messick, Mrs. J. F., Auburn
 Millican, Jay, Hamilton
 Mitchell, Elizabeth M., Bessemer
 Mixon, Otis, Dothan
 Morris, Eldora, Notasulga
 Morris, Jane, Auburn
 Murray, John H., Brewton
 Neal, Thos. Clifford, Birmingham
 Nelson, Mrs. Fred M., Rockford
 Nelson, Fred M., Rockford
 Nesbitt, Jule S., Birmingham
 Newell, James Kirk, Dadeville
 Nixon, M. F., Argo
 Noble, Mamel, Robbins, Tenn.
 Norman, Mollie, Union Springs
 O'Hara, Minnie, Auburn
 Owens, William W., Banks
 Parker, Lorena, Notasulga
 Patrick, Mrs. B. S., Auburn

- Pearson, Gerald W., Devereaux, Ga.
 Peter, C. S., Maylene
 Pierce, Sara Emma, Culloden, Ga.
 Pimm, A. B., Tampa, Fla.
 Poole, Jno. A., Thorsby
 Powell, J. C., Auburn
 Prather, Osie Clyde, Auburn
 Prendergast, H., Auburn
 Prince, Mary Clyde, Salem
 Prince, Laura Ethel, Salem
 Prince, William Thomas, Tuscaloosa
 Prince, Cecile V., Salem
 Pruett, J. F., Weogufka
 Rea, Belva M., Vina
 Reed, Violet G., Langdale
 Reynolds, William Sumter, Saco
 Rickenbaker, D. M., Orangeburg,
 S. C.
 Rigby, Hubert B., Columbus, Ga.
 Riley, Hickman, Elba
 Robertson, Byrd, Wedowee
 Royster, Mrs. J. E., Raleigh, N. C.
 Ross, Mrs. B. B., Auburn
 Ruffin, E. E., Helena
 Rutland, Mrs. J. R., Auburn
 Rutland, Frances, Flat Rock
 Sanford, Mary Frances, Wetumpka
 Samford, James Drake, New York
 City
 Schoenlaub, Hazel A., Auburn
 Scott, Barney H., Titus
 Scott, Junia, Fort Payne
 Scoville, E. N., Orangeburg, S. C.
 Self, Leroy L., Selfville
 Seybt, Harry B., Anderson, S. C.
 Shaffer, J. P., Dadeville
 Sharit, S. G., Birmingham
 Sharp, Cleveland G., Lineville
 Shaver, Ross C., Florence
 Shaw, Chas. Martin, Notasulga
 Shealy, J. A., Minden, La.
 Sheridan, A. E., Macon, Ga.
 Shi, Mrs. B. L., Auburn
 Shotts, James Edgar, Hamilton
 Slaton, Vivian Vaughan, Notasulga
 Slaughter, Thomas, Camp Hill
 Sligh, G. O., Birmingham
 Sloan, Augustus Hoke, Clemson Col-
 lege, S. C.
 Sims, Thomas A., Nauvoo
 Smith, Mrs. C. C., Auburn
 Smith, Gordon Roysce, Auburn
 Smith, Lala, Andalusia
 Smith, Jasper N., Macon, Ga.
 Smith, Espie, Girard
 Smith, Birdie, Auburn
 Snead, Curtis E., Gadsden
 Suggs, William E., Roanoke
 Sowell, Philip Nicholas, Brewton
 Stelzenmuller, Blanche M., Fairhope
 Stephens, W. R., Loachapoka
 Stevens, Willard Lamont, Laurel,
 Miss.
 Stodghill, Eunice Rebecca, Auburn
 Stokes, Mrs. W. B., Auburn
 Stuckey, Carl Laten, Amory, Miss.
 Sullivan, Chas. B., Camp Hill
 Sullivan, J. R., Auburn
 Summers, Bovell, Attalla
 Tamplin, H. R., Auburn
 Taylor, Willie, Notasulga
 Taylor, Annie L., Auburn
 Taylor, Dana, Montgomery
 Terrell, Annie, Auburn
 Templeton, Mrs. G. S., Auburn
 Thach, Richard H., Auburn
 Thach, Harry Smith, Auburn
 Thomas, Eunice, Dadeville
 Thomas, J. K., Greensboro
 Thomas, John Rembert
 Thomason, Herbert Wright, Opelika
 Thompson, Robert Lyte, Birming-
 ham
 Thompson, Esther, Wadley
 Thornton, Cumy, Camp Hill
 Ticknor, Leona M., Auburn
 Torbert, Carrie Elizabeth, Society
 Hill
 Toomer, Fannie, Auburn
 Totty, Lilly Viola, Tallassee
 Tucker, Mattie Emma, Camp Hill
 Tucker, Edna, Equality
 Turley, L. L., Auburn
 Van Pelt, David B., Talladega
 Vassar, Lucile, Opelika
 Wade, Adelle, Smith's Station
 Wadkins, Julia C., Opelika
 Wadkins, Ross F., Opelika
 Wakefield, E. E., Albertville
 Walker, Lucie, Birmingham
 Walker, Marion N., Auburn
 Walker, Mrs. Josie R., Billingsley
 Walker, Margaret Louise, Billings-
 ley
 Waller, Mary Ruth, Notasulga
 Wall, Young, Athens
 Walter, Alfred B., Napoleonville, La.
 Watt, Edna, Montgomery
 Watt, Laura, Auburn
 Watt, Lucile, Auburn
 Watt, J. T. Jr., Auburn
 Watkins, Harold Smith, Auburn
 West, William Benjamin, Auburn
 West, Nora, Lineville
 West, Milton, Birmingham
 Whatley, Jas. W., Opelika
 Whatley, Ida, Auburn
 Whitaker, Minnie, Auburn
 Whitfield, Grace, Demopolis
 Wiatt, John Edward, Jr., Auburn
 Williams, Wheeler, Jr., Hurtsboro
 Williams, Rubye E., Notasulga

Williams, J. J., Florala
 Williams, Mrs. Emma, West Point,
 Ga.
 Williams, Felix H., Salem
 Wilmore, Mrs. J. J., Auburn
 Witt, John R., Belle Mina
 Wooten, Louise Whitfield, Jefferson
 Worley, Gordon, Auburn
 Wright, Ada, Ramer
 Wright, Geo. Herbert, Auburn

Wright, Emil, Auburn
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Vol. XIII

No. 2

THE BULLETIN

OF THE

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1918

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COLLEGE CALENDAR 1918-1919

Summer Session.....	June 3 to July 12, 1918
Examination for Admission Begins.....	Monday, Sept. 9, 1918
Session Begins.....	Wednesday, Sept. 11, 1918
First Term Begins.....	Wednesday, Sept. 11, 1918
Mid-Term Examinations.....	Oct. 21, 22, 23, 1918
Literary Society Celebration.....	Nov. 28, 1918
First Term Ends.....	Dec. 20, 1918
Second Term Begins.....	Jan. 2, 1919
Mid-Term Examinations.....	Feb. 8, 10, 11, 1919
Senior Class Exercises.....	Feb. 22, 1919
Literary Society Celebration.....	Feb. 22, 1919
Second Term Ends.....	Monday, March 24, 1919
Third Term Begins.....	Monday, March 24, 1919
Senior Theses Reported.....	May 1, 1919
Declamation Exercises.....	May 1, 1919
Field Day.....	May 1, 1919
Final Examinations Begin.....	Saturday, May 17, 1919
Junior Class Orations.....	Saturday, May 31, 1919
Commencement Sermon.....	Sunday, June 1, 1919
Annual Meeting of Trustees.....	Monday, June 2, 1919
Alumni Day.....	Monday, June 2, 1919
Senior Class Orations.....	Monday, June 2, 1919
Festival of Lights, 8 P. M.....	Monday, June 2, 1919
Commencement Day.....	Tuesday, June 3, 1919

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C. A. Cary, Veterinarian.

CHEMISTRY:

_____, Chemist,
Soils and Crops.
C. L. Hare, Physiological
Chemist.

BOTANY:

W. A. Gardner, Botanist.
A. B. Massey, Assistant.

PLANT PATHOLOGY:

G. L. Peltier, Plant Pathol-
ogist.

HORTICULTURE:

G. C. Starcher,
Horticulturist.
J. C. C. Price, Associate.
C. L. Isbell, Assistant.
L. A. Hawkins, Assistant.

ENTOMOLOGY:

W. E. Hinds, Entomologist.
D. C. Warren, Field Asst.

ANIMAL HUSBANDRY:

G. S. Templeton, Animal
Husbandman.
F. O. Montague, Assistant.
E. Gibbens, Assistant.
G. L. Burleson, Assistant.

AGRICULTURAL ENGINEERING:

_____, Agricul-
tural Engineer.

The Institute is a distinctive school of science and its applications; being also the State College for the benefit of Agriculture and the Mechanic Arts, established by the State in 1872 by endowing it with the land grant appropriation made by the United States Congress in 1862.

The leading object of the Institute, in conformity with the Act of Congress and the Acts of the State Legislature, is to teach the principles and applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts; and at the same time the discipline and liberal education obtained by the study of languages and other sciences are not neglected.

All students are required to study the English Language. The Latin, French, Spanish and German languages are also taught, and opportunity for their study is offered to students in any course.

The special and technical instruction given is thus based on a sound, general education.

In its different courses of education, work of great value to the youth of the State is accomplished by fitting them by a thorough science-discipline, in which manual training in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the faculty. The Institute thus endeavors to educate as well as instruct, to form character as well as give information of value.

ORGANIZATION

The instruction offered by the College is arranged in four divisions: (1) College of Engineering, Mines and Architecture, (2) College of Agricultural Sciences, (3) Academic Departments, (4) College of Veterinary Medicine and Surgery.

I. The College of Engineering, Mines and Architecture offers degree courses in (1) civil engineering, (2) electrical engineering, (3) mechanical engineering, (4) mining engineering, (5) chemical engineering, (6) chemistry and metallurgy, (7) architecture, and (8) architectural engineering.

In addition, students in these courses of the College of Engineering, Mines and Architecture receive instruction in other departments as follows: Mechanical drawing and machine design, English, mathematics, history and Latin, modern languages, physics, chemistry, and military science and tactics.

II. The College of Agricultural Sciences offers regular degree courses in (1) agronomy, (2) chemistry, (3) botany, (4) horticulture and forestry, (5) animal husbandry, and (6) pharmacy; a three-year course in pharmacy; a two-year course in pharmacy; a two-year course in agriculture.

In addition, students in the different departments of the College of Agricultural Sciences receive instruction in other departments as follows: English, history and Latin, modern languages, mathematics, mechanic arts, surveying, physics, geology and mining engineering, mechanical drawing and machine design, military science and tactics, and veterinary science.

III. A degree course is offered in the following subjects: Education, political economy, mental science, English, history and Latin, modern languages, mathematics, physics, military science and tactics.

In addition students in the general course receive instruction in the following technical departments: Mechanic arts, drawing, geology, animal husbandry, chemistry, botany, and agronomy.

IV. The College of Veterinary Medicine and Surgery offers a four-year course leading to the degree of Doctor of Veterinary Medicine. This college comprises the following departments: Veterinary medicine, physiology, surgery, anatomy, therapeutics, pathology, histology, bacteriology, obstetrics, infectious diseases, meat inspection, milk inspection, and animal parasites.

FACILITIES FOR INSTRUCTION

The Institute possesses facilities for giving laboratory instruction in history, Latin and the departments of applied science.

COLLEGE OF ENGINEERING, MINES AND ARCHITECTURE

I. Civil Engineering.—The department of civil engineering is located in Broun Hall and occupies two lecture rooms, a drafting room, an office, an instrument room and a road materials laboratory. It is equipped with transits, levels, plane tables and other instruments necessary for giving field practice in the several branches of surveying.

A very complete camping outfit consisting of tents, cots, stools and kitchen and mess tent outfit, is available for use in the summer camp and school of surveying.

The drafting room is spacious and well lighted, and is equipped with well appointed drawing desks, tables, filing cases, models of bridges and roofs, and a large number of blue prints donated by various bridge companies for study and comparison by students in bridge and structural design.

In practical hydraulics, the college water works system, including pipe lines, pumps, stand pipe, bored wells with air lifts, fire hose and nozzles, etc., are available for use of the students; and the students also determine the flow in several natural streams with aid of current meters and weirs. There is a number of large and small hydro-electric plants relatively near Auburn, and visits of inspection are made by students to these plants.

II. Electrical Engineering.—In the engineering building four rooms and two offices are used by the department of electrical engineering. Two rooms are class rooms, another is used for the telephone laboratory, and the fourth is a laboratory for electrical measurements.

The wiring in this building is arranged so that alternating and direct current of various voltages for power, lighting, and experimental purposes can be delivered to any room.

In connection with the laboratories there is installed a repair and construction shop furnished with a variety of hand tools and with power driven machine tools.

A large amount of electrical testing and measuring apparatus as well as commercial machinery has recently been installed in the laboratories.

(a) The electrical measurement laboratory is furnished with a variety of resistance boxes, bridges, galvanometers, standard cells, condensers, etc., as well as two photometers. In addition to the laboratory instruments proper, just noted, the department

is provided with representatives of most of the types of commercial ammeters, voltmeters, and indicating and recording wattmeters for A. C. and D. C. work. There is also a 30,000 volt transformer for break-down tests of insulating materials.

(b) The telephone laboratory is provided with a full line of telephonic apparatus, telephones, relays, condensers, plugs, jacks, lamp and other signals, etc., representative of the Bell and a number of independent telephone companies.

Single pieces are so mounted that they can be connected up in any desired manner and thus the connections of any particular system can be made up and tested out.

Twenty cells of Edison storage battery are used to furnish energy for a board equipped for common battery and magneto service with trunking circuits. This board is a standard 100 line board equipped with one strip of twenty answering and multiple jacks, ringing, listening keys, and cord signals for four cords.

(c) The laboratory is equipped with a large number of D. C. and A. C. generators, motors, and other appliances especially adapted for experimental work. In addition the equipment of the power plant is so arranged as to be readily available for purposes of instruction and investigation.

The machines for experimental work are arranged on testing platforms rendering them readily accessible. By means of a comprehensive wiring layout with individual connection boards for each machine, a wide variety of combinations of machines can easily be made.

The main power plant supplies power for operating all shops, and laboratories, pumping water, and lighting the town of Auburn. The connected motor load is a little over 250 horse power, and about 100 kilowatts are used for lighting service. This plant therefore affords unusual opportunities for students to obtain practical experience in the operation of steam and electrical machinery under commercial conditions.

III. Mechanical Engineering.—The laboratory work is considered an important part of the course and is arranged as far as possible to illustrate and supplement the work as carried on in the class room.

The steam and heat engineering laboratory is located on the first floor of Broun Hall, and the following apparatus is available for instruction: A 35-horse power cross compound engine, especially arranged for experimental work; a surface condenser with air and circulating pumps attached; a 20-horse power slide valve engine; an electric headlight engine; a 15 horse power steam turbine; steam pumps, hot and cold water meters, tanks, scales, indicators, calorimeters, thermometers, pyrometers, steam gauges and apparatus for testing steam gauges.

In the line of internal combustion engineering the following apparatus is available for instruction purposes: A 12-horse power four stroke cycle engine using gasoline or kerosene, a 4½-horse power four stroke cycle kerosene engine, a 2½-horse power kerosene engine, a 2-horse power two stroke cycle gasoline engine, an Ericsson hot air engine, a motor driven air compressor with motor, a volume blower, and the necessary tanks, scales, indicators and other auxiliary apparatus necessary for making tests.

A refrigerating plant of 2½ tons capacity, including ammonia condenser and cooling coils, brine circulating system, pumps, meters, weighing scales and all apparatus needed for a study of the refrigerating cycle. The plant is driven by a steam engine, and provision is made to measure the power delivered and steam consumption of the engine.

The equipment of the power house is also available for instruction, and consists of the following: A 300-horse power poppet valve engine; a 160-horse power angle compound engine; a 60-horse power simple engine; a 200-horse power water tube boiler; a 100-horse power water tube boiler, two locomotive air pumps.

Another room on the first floor of Broun Hall has been fitted up for a laboratory for testing of materials. In it are installed a Riehle testing machine arranged for making transverse, compression and tension tests, and micrometer apparatus for measuring the deformation of the specimen under test, and an Olsen torsion testing machine with auxiliary apparatus. There is also provided a cement testing outfit consisting of a testing machine, sieves, briquette moulds, boiler, and other apparatus for testing the strength, setting properties, fineness, and specific gravity of cement.

On the second floor of Broun Hall is located a laboratory for testing fuels, furnace and illuminating gases, and lubricants. The present equipment consists of a Mahler bomb calorimeter and a Parr calorimeter, for determining the heating value of fuels, complete apparatus for collecting and testing flue and furnace gases, apparatus for determining viscosity, the specific gravity, flash point, the coefficient of friction, and other properties of lubricating oils. A small electric motor furnishes power for grinding samples, driving blower for air blast, stirring, and other such work.

IV. Mechanic Arts.—The instruction in shop work is used as an auxiliary in technical education and as a school of manual training in the arts that constitute the foundation of most industrial pursuits. The work performed by the students is instructive in character, and is intended to give the greatest amount of instruction in principle with the least repetition of

operations and the smallest consumption of time. The work is executed from drawings and the instructor in charge of the class makes the lessons before the class, or gives such specific directions as may be necessary to enable the student to make them. This is supplemented by individual instruction.

All students in the freshman class take this shop work, three periods a week, each period being two hours long. The sophomore class takes two periods a week. The purpose is not to teach a trade, but to train the eye, the hand, and the mind to more perfect co-operation, a training which will be of value in any pursuit in life. This training involves the principles at the foundations of all trades, of equal value to the student who wishes afterwards to learn a trade.

Three-phase electric motors are used for driving the different shops, the motors receiving current from the large alternator in the power house.

(a) The wood department is located in a room 90 x 50 feet, and is provided with a surface planer, a variety saw, a swing cut-off saw, a boring machine, and a grindstone. There are in addition, thirty benches for carpentry work, with the necessary tools.

(b) The wood turning and pattern shop is located in a commodious room 40 x 60 feet, in the second story of the new power house. It is equipped with twenty-eight wood-turning lathes, a grindstone, a band saw, a buzz planer, a pattern maker's lathe, a double circular saw, a surface planer and a drum sand-papering machine.

In each of these departments special tools for occasional use are kept in a tool room for the purpose.

In addition to the regular carpentry tools in the benches each student is supplied with a set of chisels, and plane irons, with a locker to keep them in, and is held responsible for their care and condition.

(c) The forge shop is equipped with twenty-four down draft forges, with anvils, hammers, sledges, and other tools necessary for blacksmith work, including a punch and shear for cutting and punching iron, and a blacksmith drill. The blast is supplied by a blower driven by an electric motor. The smoke from the forges is removed through underground passages by a 60-inch exhaust fan and discharged into the chimney.

(d) The foundry is equipped with a 23-inch Colliau cupola, having a melting capacity of 2,000 pounds of iron per hour, the necessary molding tools for bench and floor work, benches, a core oven, ladles, molding flasks, a foundry crane, etc. A special blower driven by an electric motor is provided to furnish air blast for the cupola. There is also a brass furnace with

crucibles, crucible tongs and the appliances necessary for making brass castings.

(e) The machine shop is a room 30 x 100 feet, and is equipped with ten 14-inch, two 16-inch and one 18-inch engine lathes, one 10-inch speed lathe, a 20-inch drillpress, a 10-inch sensitive drill, a 16-inch shaper, two iron planers, one 22-inch by 5 feet and the other 26-inch by 6 feet, a back geared universal milling machine, with vertical milling attachment, a water tool grinder, a bench grinder, a universal grinding machine, a universal cutter and reamer grinder, a twist drill grinder, and two power hack saws. Four of the engine lathes have compound rests, three have taper attachments, and one is fitted with a turret and a large number of special tools and fixtures which practically convert it into a manufacturing lathe, and serve to illustrate the methods of manufacture by duplicate parts.

For chipping and filing, eighteen benches are fitted with vises and each student is supplied with hammer, chisels, files and such other tools as he may need, and a locker in which to keep them. A gasoline engine is installed in one end of the shop, and is used for driving when the steam plant is not running. The tool room is supplied with general machinist tools, such as chucks, drills, reamers, taps, dies, gauges, jigs, and special tools. A convenient room is supplied with lockers for keeping clothes and basins supplied with hot and cold water for the use of the students. The different shops are equipped with electric lamps, and current is furnished when necessary.

V. Mining Engineering, Geology, Mineralogy.—The Department of Mining and Geology occupies parts of the first and third floors in the east wing of the Engineering Building. On the third floor the department occupies four rooms and office. The four rooms are all of about the same size, occupying about 960 square feet of floor space each; (1) lecture and recitation room, (2) mineralogical laboratory, (3) geological exhibit room, (4) drafting room. The class room has a seating capacity of sixty-four. The drafting room can accommodate twenty simultaneously. Here instruction is given in mechanical drafting, the calculating and plotting of field notes and in graphical design of mine structures.

In the mineralogical laboratory there are accommodations for thirty-six. Each student is supplied with drawer, locker, and the necessary equipment for studies in crystallography, mineralogy and lithology. In the exhibit room adjoining is maintained a good type collection of minerals and lithological specimens as well as working specimens. There is also a collection of fossils and casts illustrating historical geology. Other equipment of the geological department consist of wooden, transparent, and skeleton crystal models; specific gravity balan-

ces; contact and reflecting goniometers; a photographic microscope and slides for both microscope and stereopticon lanterns.

VI. Ore Dressing.—The ground floor is occupied entirely by the metallurgical laboratory. The laboratory is well equipped with ore dressing plants. The concentrating plant consists of a gyratory crusher, two sets of roll crushers, two bucket elevators, four trommels or revolving screens, two classifiers, four Hartz jigs and a seven-foot Wilfley concentrating table.

The stamp mill is of full size Nissen type, circular discharge and interior amalgamating plate. The outside amalgamating plate is full size, being ten feet long. The stamp mill and concentrating plant are fed from their respective bins by two different types of automatic feed. The ore before entering the bin is crushed to proper size by a Blake jaw crusher. The model cyanide plant illustrates the leaching department of the cyanide process and the extractor box work. It consists of one solution tank, two sand tanks, with false bottoms and filters, one gold tank, and a set of extractor box compartments of the up-flow type.

Besides the equipment already mentioned there is an automatic sampler. The cement floor in this department gives a good surface for illustrating coning and quartering in the process of hand sampling.

A twenty-horse power motor is the source of power for this laboratory. Shafting, belting and gears of various kinds transmit the power to the various machines so that a large variety of mechanism is illustrated.

VII. Mechanical Drawing and Machine Design.—The department of mechanical drawing and machine design is supplied with equipment for teaching mechanical drawing, descriptive geometry, kinematics and machine design.

A convenient cabinet is supplied with a complete set of Schroeder's descriptive geometry models for demonstrating the principles of descriptive geometry and mechanical drawing. A small reference library and a library of selected catalogues of manufacturers, which is being established for the use of students in advanced machine design, occupy a suitable case. A Beck vertical wall file, 36 x 48 inches, for filing commercial blue prints, is filled with selected blue prints furnished by prominent manufacturers, and is made use of by students in machine design.

A number of kinematic models and a large collection of engineering specialties, sectioned to show interior, which were donated by the various manufacturers, occupy a sectional case, and are used in elementary work in machine design and mechanical drawing. The filing envelopes, which contain the

students' drawings are kept in alphabetical arrangement in a case of drawers.

This department is equipped with an outfit for making blue prints, consisting of two sun printing frames 18 x 24 inches and 30 x 42 inches, each mounted on a car and track and suitable conveniences for washing and drying the prints.

All students in the lower classes are required to take drawing, a study of which tends to discipline the mind as well as to train the eye and hand to accuracy of observation and execution. Four large well-lighted drawing rooms which will accommodate (at one period) two hundred and fifty students, are provided with tables, lock boxes, etc. The drawing rooms have been equipped with one hundred and fifty new drawing tables of the most modern pattern.

VIII. Architecture.—The department of architecture is provided with four well lighted rooms in the Main Building. The drafting room is open from 8:00 A. M. to 10:00 P. M., and each student has his own table to which he may come at any time, and a steel locker for materials; members of all classes are together in this room, and the younger men find inspiration in the work of the older ones. The studio for freehand drawing and water color painting is furnished with adjustable tables and a good collection of models and plaster casts of sculpture and architectural details.

The architectural library is conveniently located with respect to other rooms of the department, and the books, journals, and drawings are freely accessible to students during working hours; under proper restrictions books may also be taken out for home use. The equipment of the lecture room includes a lantern and a carefully selected collection of slides. Quarters for clay modeling are fitted out in Broun Hall.

For advanced work in construction the department of architecture has at its disposal the resources of the various engineering laboratories. In the civil engineering testing laboratory the student investigates the properties of materials, such as cement, stone, brick and steel; in the mechanical laboratory he becomes acquainted with the processes involved in the heating and ventilation of buildings, and the operation of steam and gas engines; in the electrical laboratory he gains a knowledge of dynamo electric machinery, and methods of wiring and illumination of buildings.

On file in the office of the department is a growing collection of working drawings and specifications contributed by practicing architects. A practically permanent display of rendered drawings is maintained on the walls, student problems in design being hung as completed for purposes of inspection and criticism.

COLLEGE OF AGRICULTURAL SCIENCES.

IX Practical Chemistry.—The chemical apparatus recently purchased for the chemical laboratory consists of a full supply of the most improved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to the first class laboratories, there have been imported a new and improved Schmidt and Heinsch's polariscope, ten short-arm balances of latest pattern, Bunsen's spectroscope, Abbe refractometer, and other instruments for delicate and accurate work.

The investigations that are undertaken in this laboratory by scientific experts in connection with the work of the agricultural experiment station, are of special value to advanced students, and afford them unusual opportunities to learn the methods of scientific research.

The building contains a large general laboratory that accommodates eighty students, a special laboratory for seniors that will accommodate forty students, a lecture room with a capacity of one hundred and fifty seats, and nine other rooms, all appropriated to instruction and research in chemistry.

The State chemical laboratory for the official analysis of fertilizers is connected with this department.

X. Agriculture.—The agricultural experiment station established in connection with the Institute, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professors in the field where lectures are delivered in the presence of the objects discussed, and during the year exercises in practical agriculture of an educational character are given the students who enter upon this course of study.

The farm contains 304 acres.

XI. Botany.—The department of Botany occupies the western half of the third floor of Agricultural Hall. The rooms in use include a lecture room having seats for sixty-four students, a general laboratory accommodating forty-five students, a smaller laboratory for bacteriology and pathology accommodating twenty students, two small laboratories for professors and advanced students, two offices, a dark room, and store room. The general laboratory is supplied with microscopes, glassware, and the general equipment of apparatus and materials necessary for gross and microscopic work in plant morphology. The equipment for work in plant physiology and

pathology has been very materially increased by the installation of much new apparatus needed for quantitative work in these subjects. These additions include autoclaves, sterilizers, incubator, drying oven, automatic water still, constant temperature baths, and ovens, Kjeldahl nitrogen determination apparatus, distilling and extraction apparatus, and many smaller pieces. These accessions to the equipment provide facilities for accurate work, under controlled conditions, in the chemical phases of plant physiology and for cultural studies in bacteriology and plant pathology and permit expansion and development of the courses offered in these subjects to a degree commensurate with their importance.

The greenhouse of the department has a floor space 30 x 110 feet, with an adjoining laboratory room 30 x 30 feet. It is used for experimental work in plant pathology and plant physiology. The facilities provided are sufficient to permit the growth of ample material for class use in these subjects as well as for the investigations of special problems by the staff.

The botanic garden contains a fairly representative collection of the native trees and shrubs of the state, and it is planned to make a collection of native medicinal plants. A portion of the garden will also be used as an outdoor experimental plat for the growing of materials employed in the work of instruction or in research.

XII. Pharmacy.—The laboratory of this department occupies the first and second floors of the annex to the chemical laboratory, and is provided with a sufficient supply of drugs and apparatus necessary for instruction in pharmaceutical preparations. The equipment for the laboratory includes a Laurent Polariscope, a Pulfrich refractometer, a vacuum distilling and drying apparatus, consisting of $\frac{1}{2}$ horse power air pump, vacuum chamber, condenser, and Bruhl receiver for fractional distillation under diminished pressure, a three-horse power electric motor, a complete outfit for organic combustion work, and three chemical balances.

On the third floor is located the lecture room, storeroom, and drug mill room.

The new pharmaceutical laboratory on the basement floor of the pharmaceutical building is fitted with steam and has a full equipment for research work in pharmaceutical chemistry.

The students work in the laboratory with the professor from five to eight hours, six days in a week.

XIII. Horticulture.—A well-lighted and heated one-story brick building adjoins the greenhouses. It affords space for about 40 students at one time for practical work in grafting, seed germination, seed testing, transplanting, grading, packing, spray mixing, etc. It contains also a complete equipment for

instruction in canning. The two greenhouses, 20 x 80 feet are modern in construction. They contain a varied collection of the leading bedding and decorative plants, and afford facilities for practical instruction in plant propagation, the forcing of vegetables and cut flowers, and greenhouse management. Hot beds and cold frames of cement construction are also at hand. Instructors also make use of the experimental orchards, vineyard, garden, and ornamental plantings on the grounds of the department for practical instruction. Accurate experiments in the culture of various fruits and vegetables adapted to the state are constantly in progress. The departmental library embracing many of the standard works, magazines, bulletins and other equipment are accessible to advanced students under the usual regulations.

XIV. Entomology, Zoology.—The department for teaching these subjects is located on the first floor of Comer Hall. A combined lecture and laboratory room provides accommodation for 70 men at a lecture or 25 in laboratory work. It is well equipped with apparatus for microscopic and dissection work, and to supplement this, charts, models and preserved specimens of invertebrate animals are used.

In addition the course in Entomology has at hand in the station laboratory, adjoining the class room, a valuable and growing collection of insects especially of the economic species of Alabama. In connection with the range of greenhouses there is also a large workroom for experimental and demonstrational work with insecticides and an insectary 16 x 40 feet within which the study of insect problems may be conducted at any time under controllable conditions. This room is also used in connection with the college apiary to demonstrate equipment and apparatus as used in modern bee-keeping, a part of the course in Entomology. The farm, orchards, vineyards and truck gardens afford a convenient opportunity for the observation, study and control of such economic pests as may occur therein. The student in Entomology is made familiar with several types of hand and power spraying and dusting apparatus, also spraying accessories which are recognized as essential in successful agriculture.

A reference library, containing general and standard works upon entomology and zoology and publications of the government and State experiment stations is accessible to students.

XV. Animal Husbandry.—The Animal Husbandry Farm contains about 260 acres. Pure bred herds of Angus, Hereford, Shorthorn, and Jersey cattle, Berkshire, Duroc-Jersey, and Poland China hogs, a Percheron Stallion, and several teams of work mules are kept on this farm for experimental work, and

for use in instructing the college students. The students visit the Animal Husbandry farm with their instructors for instruction in judging, feeding, and management of the various classes of live stock. During the junior and senior years the students make trips to several of the best live stock farms in the State to study the different types of animals kept on the farms and the live stock problems of the breeders. The students are also required to make trips during the senior year to live stock shows and attend some of the leading live stock sales in the State.

ACADEMIC WORK.

XVI. History.—All advanced work in history is conducted by the laboratory method. This plan has been successfully employed in the junior, the senior, and the graduate classes. A large and well-lighted room has been set apart for this work in the new library building where all the resources of the rapidly growing library are easily accessible. This room is equipped with maps, diagrams, charts and suitable tables and chairs. The library is a depository for all government publications. These and other books on American history, with which it is well supplied, offer abundant material for research work in the history of our country. The publications collected by the experiment station constitute valuable material for study in industrial history.

XVII. Physics.—The physical laboratory occupies two rooms one of these being permanently darkened for experimental work in light. It is equipped with numerous standard instruments of precision, such as verniers, micrometers, cathetometers, an horizontal comparator, a Kater's revision pendulum, balances, etc., and a quantity of minor apparatus. Recently there have been added a concave grating spectograph, a large induction coil of 12-inch spark, and other apparatus of value.

XVIII. Military Tactics.—Instruction in this department is given in conformity with the Act of Congress. Students receive the benefit of regular military drill, and in addition, the military system is used as a means of enforcing discipline and securing good order, promptness and regularity in the performance of academic duties. The department is supplied with cadet rifles and accoutrements for the corps.

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

XIX. Physiology and Veterinary Science.—The veterinary department occupies a separate two-story building with nine rooms. It is provided with lecture room, office, working and operating rooms for clinical practice, thoroughly equipped laboratories for work in bacteriology, milk and meat inspec-

tion, and with museum containing skeletons of the domestic animals for instruction. Free clinics are given every Saturday for the benefit of the students in veterinary science.

There is a separate dissecting room with cement floor and north roof light, constructed especially for this department. This laboratory is used by the professor and students each afternoon for three months.

BUILDINGS.

The Main Building is 160 x 71 feet, and contains forty-five rooms. It contains lecture rooms, administration offices, physical laboratory, museum, armory, etc.

LANGDON HALL.

This is a two-story building 90 x 50 feet. The second story is the audience hall, used for commencement and other public occasions.

POWER HOUSE AND SHOPS

The first story of Langdon Hall is appropriated to the laboratory of first year wood work in mechanic arts.

The machine shop, forge shop, foundry, and boilers are installed each in separate buildings. A handsome building, two-stories in height, pressed brick and stone trimmings, has been constructed for occupation by the power plant on the first floor and by the pattern making department on the second floor. The dynamo laboratory occupies a separate building.

A commodious boiler house has been built. It is of fire-proof construction and is supplied with track and cars for handling coal from the bin to the boiler. Scales are provided for keeping accurate account of the coal consumed.

BROUN ENGINEERING HALL.

The alterations and additions to the William LeRoy Broun Engineering Hall were completed and the building occupied in September, 1910. The finished structure is 250 feet long, 50 to 90 feet deep, and three and four stories in height, enclosing a floor area of 43,500 square feet. In construction this building is practically fire proof and in exterior design conforms in general to the other buildings on the campus. The walls are laid up in selected red brick, with limestone and terra cotta trimmings.

Offices, lecture rooms, and laboratories for the departments of mechanical, electrical, mining and civil engineering, machine design and drawing, are located within this building, and all the interior accommodations are especially arranged to facilitate the special work of each department.

This building was designed and superintended by the department of architecture.

CHEMICAL LABORATORY.

The Chemical Laboratory is a two-story structure, 40 x 60 feet, with a rear projection, 35 x 60 feet, of one-story and basement, and contains eight rooms. The exterior is of pressed brick, with cut stone trimmings and extra terra cotta ornamentations.

The chemical laboratory for the agricultural experiment station occupies a building 60 x 26 feet, and is appropriated exclusively for chemical investigation and research.

PHARMACY BUILDING.

This is a three-story brick building containing rooms and laboratories for the department of pharmacy.

SMITH HALL.

The Otis D. Smith Dining Hall, constructed of stone and pressed brick, is two stories in height, and one hundred and forty feet in length. It will accommodate three hundred in the dining hall, and forty in the dormitory above. The style is semi-colonial.

CARNEGIE LIBRARY.

The library building is a handsome structure of classical outline, monumental in its general effect.

AGRICULTURAL BUILDING.

A handsome and commodious building is occupied by the departments of (1) agronomy, (2) horticulture, (3) botany, (4) entomology, and (5) animal husbandry, together with a separate set of buildings for practical work in each of these departments. It is the general opinion that there is no superior, if equal, group of buildings for agricultural purposes in the South. The building is three stories in height and is constructed of pressed brick with stone trimmings.

ALUMNI GYMNASIUM.

The central unit of the Gymnasium presented to the College by the Alumni was dedicated February 22nd, 1916. It is an attractive three-story structure, 110 x 60 feet, built of brick and stone. The first floor contains the dressing rooms and showers for the athletic teams, the students' lockers and showers being located on the second floor. The main Gymnasium hall is on the third floor.

It is planned to complete the building at an early date.

REQUIREMENTS FOR ADMISSION

APPLICATION.

All applicants for entrance to any departments of the College should make application to the Registrar as early as possible before the opening of the session (September 11, 1918). Those who desire to be admitted by certificate should make application as soon as possible after their graduation from the High School. To all applicants a blank will be furnished which they are expected to fill out and file with the Registrar in advance of entrance.

All applicants for admission must present testimonials of good moral character and those who come from other colleges must bring certificates of honorable discharge or furnish other testimonials of good moral character.

Entrance examinations will begin on Monday, September 9th. These examinations will be required of all students entering college for the first time, except those who bring certificates from accredited high schools or preparatory schools or from reputable colleges or universities.

REGISTRATION.

Students upon their arrival in Auburn should report promptly to the President.

All students are required to register on the first day of the session and on the opening day after the Christmas vacation. Registration at a later date involves additional administration work to the College and seriously affects the work of the student. An additional fee of \$2.00 will be charged for registration after September 14th and January 2nd. No exception will be made to this regulation.

All students, whether applicants for regular or irregular courses, are required to report for classification to the Chairman of the Committee on Entrance Examinations who will give them cards of admission to the classes to which they are assigned.

ADMISSION TO THE FRESHMAN CLASS.

To enter the freshman class the applicant must be not less than fifteen years of age.

For unconditional admission to any bachelor's course, or to the Veterinary College, a student will be required to present fourteen entrance units.

A unit is defined as a high school or preparatory course of five periods of forty to forty-five minutes each, weekly, throughout the academic year of nine months. In science courses, two laboratory periods are counted as the equivalent of one

recitation period. Credits of less than one unit may be granted for courses that do not run full time. No more than four units will be given for one year's work in the high school.

Students who wish to enter the regular courses and are deficient in entrance requirements may enter and be classified as conditioned students, provided their deficiencies do not exceed two units.

Of the fourteen units required for admission in full standing to the freshman class, seven and a half are prescribed as follows:—

Mathematics $3\frac{1}{2}$ units:

High School Arithmetic.

Algebra, complete.

Plane and Solid Geometry.

English 3 units:

High School Grammar.

Rhetoric and Composition.

History of American or English Literature.

Classics.

High School History of the United States 1 unit.

ENTRANCE SUBJECTS.

Credit for admission will be given for any high school subject properly taught.

Algebra	1½ units	Virgil	1 unit
Advanced Arithmetic	½ unit	Greek	1 to 2 units
Plane Geometry	1 unit	Commercial Geogra-	
Solid Geometry	½ unit	phy	½ unit
Trigonometry	½ unit	Physical Geography	½ unit
High School Gram-		Agriculture	½ to 2 units
mar	½ unit	Zoology	½ to 1 unit
Rhetoric and Compo-		Physiology	½ to 1 unit
sition	1½ units	Biology	½ to 1 unit
History of American		Physics	½ to 1 unit
or English Litera-		Chemistry	½ to 2 units
ture	1 unit	Botany	½ to 1 unit
Advanced U. S. His-		Civil Govern-	
tory	1 unit	ment	½ to 1 unit
Ancient History	1 unit	Shop Work	½ to 2 units
Mediaeval and Mod-		Mechanical Draw-	
ern History	1 unit	ing	½ to 2 units
English History	1 unit	Freehand Draw-	
Pedagogy	½ unit	ing	½ to 1 unit
Psychology	½ unit	Music	½ to 3 units
French	1 to 2 units	Bookkeeping	½ to 1 unit
German	1 to 2 units	Stenography and	
Spanish	1 to 2 units	Typewriting	½ to 1 unit
Latin Grammar	1 unit	Domestic	
Caesar	1 unit	Science	½ to 2 units
Cicero	1 unit		

SPECIAL OR IRREGULAR COURSES.

In accordance with the requirements of the American Conference of Pharmaceutical Faculties, for entrance to the two-year course in pharmacy leading to the degree of Graduate in Pharmacy, at least two years of high school work are required. Fourteen entrance units are required for admission to the three-year course in pharmacy leading to the degree of Pharmaceutical Chemist, and to the pre-medical course.

For entrance to the two-year special course in architecture no examination is required, but the applicant must be not less than twenty-one years of age and have had a satisfactory experience in the office of a practicing architect. He must show by drawings that he possesses a working knowledge of the "Orders" and satisfy the department that his preparation in other lines has been adequate to enable him to carry the work with success.

For entrance to any special or irregular course, not specified above, the applicant must have one of the following four requirements:

1. He must be 21 years old, or
2. He must have 14 units, of which 2 may be conditioned, or
3. He must present a statement from the principal of his last school advising his admission to the course, or
4. He must have been out of school during the previous year engaged in some practical line of work akin to the course desired, or serving in the army.

He must also in every case satisfy the college that he is *prepared to do the work outlined in the course.*

Students are urged to take the regular four-year courses whenever it is possible, and to remain in the high school until prepared for them.

Special or irregular courses are intended for mature students who, because of special circumstances, are not able to take the regular college work. These courses are *not short cuts* to the longer ones, and work done in them does not count toward entrance units for courses that require 14 units for admission.

ADMISSION BY CERTIFICATE.

Students presenting official statements from the schools listed below will be given entrance credit for all work completed. Those having 14 units will be admitted to full standing in the freshman class. Those having 12 units will be classed as conditioned freshmen, and the remaining 2 units must be removed by the beginning of their junior year. Not more than four units will be given for any one year's school work.

All students are strongly advised to complete the full course given in their schools before applying for admission to college.

CERTIFICATE SCHOOLS.

1. State Normal Schools.
2. District Agricultural Schools and County High Schools.
3. The following city, denominational and private schools

in Alabama:

Alexander City High School, Alexander City	J. M. Pearson
Andalusia High School, Andalusia	L. E. Brown
Anniston High School, Anniston	D. R. Murphey
Green University School, Athens	W. K. Green
Bay Minette High School, Bay Minette	S. M. Tharpe
Bessemer High School, Bessemer	L. L. Vann
Central High School, Birmingham	C. A. Brown
High School, Boaz	George M. Boman
Snead Seminary, Boaz	L. F. Corley
Brewton High School, Brewton	W. I. Powers
Downing Institute, Brewton	J. M. Shofner
High School, Camp Hill	B. H. Wyatt
Industrial Institute, Camp Hill	L. Ward
High School, Carbon Hill	
Carrollton High School, Carrollton	W. G. Cameron
High School, Citronelle	Norman Olsen
High School, Collinsville	J. H. Riddle
High School, Cuba	B. W. Douglas
Decatur High School, Decatur	J. F. Collins
Demopolis High School, Demopolis	K. G. Hoover
Dothan High School, Dothan	P. W. Hodges
High School, Elba	J. F. Scofield
High School, Ensley	
Eufaula High School, Eufaula	H. L. Upshaw
Eutaw High School, Eutaw	A. F. Jackson
High School, Florence	F. T. Appleby
Gadsden High School, Gadsden	W. C. Griggs
Gaylesville Academy, Gaylesville	John D. Ray
Geneva High School, Geneva	J. E. Cheatham
Georgiana High School, Georgiana	R. C. Reese
High School, Girard	R. K. Hood
High School, Gordo	Rowe Watson
Greenville High School, Greenville	C. B. Gamble
Haleyville High School, Haleyville	L. L. James
Huntsville High School, Huntsville	R. C. Johnston
LaFayette High School, LaFayette	E. G. McGehee
High School, Lanette	W. L. Leatherwood
High School, Leeds	J. W. Ellenburg
High School, Livingston	Celia Tompkins
High School, Madison	J. E. Parks
Mobile High School, Mobile	S. S. Murphy

University Military School, Mobile	J. T. Wright
McGill Institute, Mobile	Wm. A. Kerrigan
Sidney Lanier High School, Montgomery	W. R. Harrison
Barnes' School, Montgomery	E. R. Barnes
Edgar's School for Boys, Montgomery	R. B. Edgar
University School, Montgomery	J. M. Starke
Baptist Collegiate Institute, Newton	J. J. Yarbrough
High School, Opelika	S. O. White
Opp High School, Opp	W. L. Hicks
High School, Ozark	E. J. Laney
High School, Pell City	J. L. Aders
High School, Piedmont	L. Leftwich
High School, Pine Apple	C. H. Newsom
Roanoke High School, Roanoke	B. B. Baker
High School, Samson	W. B. Spear
High School, Selma	A. F. Harman
High School, Sheffield	L. E. Creel
Slocomb High School, Slocomb	E. T. Cato
High School, Sulligent	J. D. Samuels
Talladega High School, Talladega	D. A. McNeill
Thomasville High School, Thomasville	J. S. Rozier
Thorsby Institute, Thorsby	S. H. Herbert
High School, Troy	Jno. R. McLure
High School, Tuscaloosa	J. H. Foster
Tuscumbia High School, Tuscumbia	R. E. Thompson
Tuskegee High School, Tuskegee	J. B. Murphy
Union Springs High School, Union Springs	E. S. Pugh
High School, Uniontown	S. R. Logue

4. Schools in other States which are accredited to institutions of equal rank with the Alabama Polytechnic Institute.

ADVANCED STANDING.

Advanced standing in any subject is not given on preparatory school credits, and can be obtained only by an examination conducted by the professor of that subject.

Advanced standing is given for work done in other colleges of similar rank, and for work done by graduates of the State Normal Schools at Florence, Jacksonville, Livingston and Troy, of Marion Institute, St. Bernard College, of Spring Hill College and the Alabama Presbyterian College, of Anniston.

ADMISSION OF YOUNG WOMEN.

Young women of mature mind and character, who are at least seventeen years of age, will be admitted. Upon the approval of the faculty, applicants may be admitted at an age less than seventeen years if a resident of Auburn will act as guardian.

The only condition imposed will be that they engage in earnest study and attend the exercises regularly. They will board in town with private families and will attend college only at the hours of their exercises.

NUMBER OF EXERCISES REQUIRED.

All students are required to have *not less than fifteen* recitations per week, or the equivalent, in addition to the exercises in laboratory work, drawing and military drill. These additional exercises occupy not less than twelve hours per week, and in all, give twenty-seven to thirty hours per week required in college exercises.

Students shall not be permitted to take more than *five hours* of extra work without special permission of the faculty.

SPECIAL AND IRREGULAR STUDENTS.

Those students who are not able to meet the regular entrance requirements may be admitted to special courses in agriculture, architecture, engineering, chemistry, pharmacy, etc., and will be classified as special or irregular students, provided they are prepared to do satisfactory work in the subjects which they desire to take.

The privilege of taking irregular courses will be granted only to those students who are of age or to those whom for special reason the faculty may grant permission. Students who are not of age will not be permitted to enter a special or irregular course without the written permission of parent or guardian.

A student to whom this privilege has been granted will be assigned to some member of the faculty who will act as his adviser in regard to his work. The professor in charge of a department will decide whether a special student is prepared for admission to his class.

Those students who are candidates for degree, but who are not in full standing in all the prescribed studies of a class, rank in the military department with that class in which they have the greatest number of studies.

CHANGES IN COURSE.

Special and irregular students may be transferred to any regular course by presenting satisfactory entrance requirements and by standing satisfactory examinations on all the work which they have not taken in that regular course.

Students who change from one regular course to another will be required to make up satisfactorily to the heads of the departments concerned all the work in the new course that they have not had.

Permission to change from one course to another will not be granted within two weeks of any term or mid-term examination.

ADMISSION FROM OTHER COLLEGES.

Students coming from another college of similar rank will be assigned to the class to which they would belong in the institution which they have left, and will be required to make up only such back work in the course to which they are assigned as is necessary in order to carry on the regular studies of their class.

COURSES OF INSTRUCTION.

The courses of study include the physical, chemical and natural sciences, with their applications; agronomy, botany, animal husbandry, horticulture, mechanics, astronomy, mathematics, drawing, civil, electrical, mechanical and mining engineering; architecture; physiology, and veterinary science; pharmacy; English, French, German, Spanish and Latin languages; history, political economy; mental and moral sciences; education.

The studies are arranged in regular courses so as to offer liberal and practical education as a preparation for the active pursuits of life.

There are twelve degree courses for undergraduates, leading to the degree of Bachelor of Science (B. S.) each requiring four years for its completion:

- I. COURSE IN CIVIL ENGINEERING.
- II. COURSE IN ELECTRICAL ENGINEERING.
- III. COURSE IN MECHANICAL ENGINEERING.
- IV. COURSE IN MINING ENGINEERING.
- V. COURSE IN ARCHITECTURE.
- VI. COURSE IN ARCHITECTURAL ENGINEERING.
- VII. COURSE IN CHEMISTRY AND METALLURGY.
- VIII. COURSE IN AGRICULTURE.
- VIIIa. COURSE IN AGRICULTURAL EDUCATION.
- IX. COURSE IN PHARMACY.
- X. COURSE IN CHEMICAL ENGINEERING.
- XI. GENERAL COURSE.
- XII. FOUR-YEAR COURSE IN VETERINARY MEDICINE (D. V. M.)

SHORTER COURSES.

- XIII. THREE-YEAR COURSE IN PHARMACY (Ph. C.)
- XIV. TWO-YEAR COURSE IN PHARMACY (Ph. G.)
- XV. TWO-YEAR PRE-MEDICAL COURSE.
- XVI. TWO-YEAR COURSE IN AGRICULTURE.

- XVII. TWO-YEAR COURSE IN APPLIED ELECTRICITY.
- XVIII. COURSE FOR ROAD FOREMEN AND INSPECTORS.
- XIX. ONE-YEAR COURSE IN WIRELESS TELEGRAPHY.
- XX. TWO-YEAR COURSE IN MINING.
- XXI. TWO-YEAR COURSE IN ARCHITECTURE.

Special Course in Agriculture.—Young men over twenty-one years of age who desire to study agriculture will be permitted without examination to enter classes in agriculture, and will be excused from reciting in any other class, from military duty, and from all other college duties; but will be under the general college regulations, and will be required to have their time fully occupied. They may attend the lectures in agriculture in all the classes and engage in the practical work at the experiment station, in the field, stock-yard, dairy, garden, orchard, vineyard, etc., and may thus in one year acquire valuable practical knowledge of scientific agriculture.

Course I. includes the principles and applications of the sciences that directly relate to civil engineering, and is adapted to those who expect to enter that profession.

Course II. includes, besides the general principles and applications of the sciences, a special course in the applications of electricity and mechanics, and is arranged to fit men for the profession of electrical engineering.

Course III. furnishes instruction in steam engineering, materials of construction, drawing and machine design, electrical engineering, together with laboratory work. The course is intended to qualify men to fill positions in the manufacturing industries.

Course IV. includes theoretical and practical instruction in geology, mineralogy, chemistry, civil and electrical engineering, as applied to mines, mapping, exploration, boring, ventilation timbering, and all the operations pertaining to the profession of mining engineering.

Courses V. and VI. have been arranged to give theoretical and practical knowledge of architecture in order to enable students to take advantage of office opportunities upon graduation. It embraces architectural drawing and design, history, and ornamental architectural engineering, and office practice.

Course VII. provides for thorough theoretical and practical instruction in pure and technical chemistry and metallurgy, and in scientific branches relating thereto. Students taking this course also pursue the study of German or French during the junior and senior years, and are thus prepared to utilize for reference and for study, scientific journals and works published in those languages.

Course VIII. includes theoretical and practical instruction in those branches that relate to agronomy, horticulture, animal husbandry, botany and entomology, and is especially adapted to those who intend to devote themselves to agricultural and horticultural pursuits.

Course IX. includes, besides the general education of Course XI. of the lower classes, a special course in pharmacy and chemistry, and is adapted to those who expect to become pharmacists, manufacturing chemists, or to enter upon the study of medicine.

Course. X. has been arranged for students who desire preparation for chemical engineering work with special reference to planning, construction and operation of plants employed in the chemical industries, such as manufacture of fertilizers, sugars, ceramics, oils and fats, and their products, coal by-products, etc., etc.

Course XI. has been arranged to give a general and less technical education in subjects of science and language to meet the wants of those students who have selected no definite vocation in life, as well as those who intend ultimately to engage in teaching or in some commercial or professional business.

Course XII. has been established to meet the demand of the young men of the South who desire to become educated veterinarians, and for students who desire to prepare for the study of human medicine.

The shorter courses have been arranged for the benefit of those students who, for reasons satisfactory to themselves, are unable to continue at college four years, and to take one of the regular degree courses.

DEGREES.

Each applicant for a degree must submit his application and course of study by the first of October in his senior year.

No degree will be conferred upon a candidate *in absentia* unless he is officially excused for providential reasons.

The degree of Bachelor of Science will be granted to those students who satisfactorily complete one of the regular four-year courses.

A student who completes the work of the four-year course in veterinary medicine and submits a satisfactory thesis, will be granted the degree of Doctor of Veterinary Medicine (D. V. M.)

A student who completes the work of the two-year course in Pharmacy and submits a satisfactory thesis will be granted the degree of Graduate in Pharmacy (Ph. G.)

A student who completes the work of the three-year course in pharmacy and submits a satisfactory thesis, will be granted the degree of Pharmaceutical Chemist (Ph. C.)

CERTIFICATES.

A student who completes satisfactorily all the work of the senior class in a department, including the laboratory work, with approval of the faculty, may be awarded a certificate of proficiency in that subject.

Students who complete one of the two-year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

No certificate of proficiency will be given in any course unless the applicant has passed a satisfactory examination in elementary English. Every applicant for a certificate will be required to stand this special examination during the final year.

GRADUATE COURSES.

A more extended course of study may be taken by a graduate of this institution or of any college of equal grade. The completion of a course which leads to a post-graduate degree of Master of Science requires one year's residence, spent in the satisfactory prosecution of a course of study, with such laboratory work as may be approved by the faculty.

The candidate must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to his course, and must pass an examination at the close of each term, on the course of study prescribed, in which he must attain a grade of 75 per cent. The examination is written, and also oral in the presence of the faculty.

The subject for the thesis must be submitted to the faculty for approval prior to January first, and the thesis given to the professor by May first.

Applicants for a post-graduate degree and special students in post-senior studies are subject to the same general regulations as other students, and *pay the same fees*, but are exempt from all military duty.

The following courses are prescribed for the degrees named:

1. *Master of Science*.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class; or in special cases, with the approval of the faculty, a student may devote his full time to work in two departments, in each of which he has completed the full senior course.

2. *Master of Science in Pharmacy*.—Pharmacy and Chemistry.

PROFESSIONAL DEGREES IN ENGINEERING.

I. Degrees in Course.—The professional degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, Chemical Engineer, or Engineer of Mines will be conferred upon graduate students upon the satisfactory completion of the course of study prescribed, a residence of one year at the institute being required for the completion of those courses.

A written application stating the degree desired and the course of study selected must be submitted to the faculty at the beginning of the session. A satisfactory thesis must be submitted by May first.

The following courses of study are prescribed for the degrees named:

Civil Engineer.—Civil Engineering and any two subjects selected from the following: Mathematics, analytical mechanics, mechanical engineering, electrical engineering, mining engineering, bacteriology.

Electrical Engineer.—Electrical Engineering and mechanical engineering, or electrical engineering, mathematics and civil engineering.

Mechanical Engineer.—Mechanical engineering and machine design, or mechanical engineering, mathematics and mining engineering.

Chemical Engineer.—Electro-chemistry and advanced analytical or organic chemistry, together with one or more subjects selected from the following: Mechanical engineering, machine design, electrical engineering, mining engineering.

Engineer of Mines.—Graduate students who have completed the course in mining engineering may apply for this degree. The subjects to be pursued are mining engineering, civil engineering, and one other technical subject relating to mining and metallurgy, and approved by the faculty.

II. Degrees for Professional Work.—The above named professional degrees may be conferred upon graduates of the Alabama Polytechnic Institute in civil, electrical, mechanical, chemical and mining engineering, upon complying with the following requirements:

1. The candidate must have spent at least four full years in the practice of that branch of engineering in which he graduated.

2. An approved thesis must be submitted to the faculty not later than May 1st of the year in which the degree is sought.

3. The student must show that he has filled satisfactorily a responsible position in charge of important engineering work. Written testimonials from employers or clients will be accepted as evidence of satisfactory service.

4. A written application, stating the degree desired, and giving a report or outline of the professional work upon which the application is based, must be submitted not later than January 1st of the year in which the degree is to be granted.

III. Special Students in Graduate Studies.—Students who are not graduates, but are qualified in special subjects to prosecute graduate studies, and desire to prepare themselves more thoroughly for professional or special work in any of the departments of engineering, in chemistry, pharmacy, veterinary science, or other subjects in which instruction is given, may, when qualified, with approval of the faculty, enter this higher department of study and have all the privileges of post-graduate students.

A certificate of proficiency will be given when any one subject of a post-graduate course is satisfactorily completed.

Two degrees will not be given in the same year.

LABORATORIES.

Laboratory instruction constitutes an important feature in the course of education provided for the students and as far as possible all students are required to enter upon laboratory work in some one department.

Laboratory instruction and practical work are given in the following departments:

- I. CIVIL ENGINEERING, FIELD WORK, SURVEYING, ETC.
- II. ELECTRICAL ENGINEERING, TELEPHONE ENGINEERING.
- III. MECHANICAL ENGINEERING.
- IV. MECHANIC ARTS.
- V. MINING ENGINEERING, MINERALOGY.
- VI. ORE DRESSING.
- VII. ARCHITECTURE, ARCHITECTURAL ENGINEERING.
- VIII. TECHNICAL DRAWING, MACHINE DESIGN.
- IX. CHEMISTRY, METALLURGY.
- X. AGRONOMY.
- XI. BOTANY.
- XII. PHARMACY, PHARMACEUTICAL CHEMISTRY.
- XIII. HORTICULTURE.
- XIV. ENTOMOLOGY, ZOOLOGY.
- XV. ANIMAL HUSBANDRY.
- XVI. HISTORY, LATIN.
- XVII. PHYSICS.
- XVIII. MILITARY TACTICS.
- XIX. VETERINARY SCIENCE, BACTERIOLOGY, PHYSIOLOGY.
- XX. WIRELESS TELEGRAPHY.

NOTE:—Special work in Latin or History may be taken by students in the general course as a substitute for laboratory work.

COURSES OF INSTRUCTION

The numbers in the Courses of Instruction refer to the subjects as described under "Description of Courses." The following abbreviations are used: Ac., Academic Departments; Eng., College of Engineering and Mines; Agr., College of Agricultural Sciences; Ed., Department of Agricultural Education; Vet., College of Veterinary Medicine and Surgery. The numbers in columns indicate the hours per week.

English, German, French, Latin or Spanish may be taken as language in freshman, sophomore, junior and senior classes, provided there is no conflict in schedule. Approved courses in Education may be substituted for language in junior and senior classes in all courses.

A student, who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

GENERAL COURSE

FRESHMAN CLASS.

First Term.

English (Ac. 102a) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish or Science -----	3
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish or Science -----	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) or Spanish or Science -----	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

Latin (Ac. 210) or Spanish or Science -----	5
English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Physics (Ac. 504) -----	3
*Mathematics (Ac. 403) -----	5
Botany (Agr. 301) or other Science -----	6
Chemical Lab'y (Agr. 110a) or other Lab'y -----	6
Military Drill (Ac. 600) -----	3

Second Term.

Latin (Ac. 210) or Spanish or Science -----	5
English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Physics (Ac. 504) -----	3
*Mathematics (Ac. 403) -----	5
Botany (Agr. 301) or other Science -----	6
Chemical Lab'y (Agr. 110a) or other Lab'y -----	6
Military Drill (Ac. 600) -----	3

Third Term.

Latin (Ac. 210) or Spanish or Science -----	5
English (Ac. 103c) -----	3
History (Ac. 204) -----	2
Physics (Ac. 504) -----	3
*Mathematics (Ac. 404) -----	5
Botany (Agr. 301) or other Science -----	6
Chemical Lab'y (Agr. 110a) or other Lab'y -----	6
Military Drill (Ac. 600) -----	3
*With approval of faculty other work may be substituted.	

JUNIOR CLASS.

First Term.

English (Ac. 107) (a)	3
Latin (Ac. 211) (a) or Civics ---	3
French (Ac. 301a) (a) or	
Spanish	4
German (Ac. 305a) (a)	4
Education	3
Chemistry or other Science ---	3
Military Tactics (Ac. 601) ----	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) ----	3

Second Term.

English (Ac. 107) (a)	3
Latin (Ac. 211) (a) or Civics ---	3
French (Ac. 301b) (a) or	
Spanish	3
German (Ac. 305b) (a)	3
Education	3
Chemistry or other Science ---	3
Military Tactics (Ac. 601) ----	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) ----	3

Third Term.

English (Ac. 107) (a)	3
Latin (Ac. 211) (a) or Civics ---	3
French (Ac. 301c) (a) or	
Spanish	4
German (Ac. 305c) (a)	4
Education	3
Chemistry or other Science ---	3
Military Tactics (Ac. 602) ----	1
History Lab'y (b) (Ac. 206) --	6
Military Drill (Ac. 600) ----	3

(a) Approved course in Education may be substituted for one language.

(b) The student may substitute laboratory of any department of natural science for which he may be qualified.

SENIOR CLASS.

First Term.

English (Ac. 109) (a)	2
Education	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205)	3
French (Ac. 302a) or Span-	
ish (Ac. 310) (a)	4
German (Ac. 306a) (a)	4
Geology (Eng. 441) (a)	2
History Lab'y (b) (Ac. 206) --	6
Military Science (Ac. 603) ----	1

Second Term.

Economics (Ac. 2) (a)	2
Education	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205)	3
French (Ac. 302b) or Span-	
ish (Ac. 310) (a)	3
German (Ac. 306b) (a)	3
Geology (Eng. 441) (a)	2
History (b) (Ac. 206)	6
Military Science (Ac. 604) ----	1

Third Term.

Economics (Ac. 202) (a)	2
Education	3
Latin (a) (Ac. 212) or Cons.	
History (Ac. 205)	3
French (Ac. 302c) or Span-	
ish (Ac. 310) (a)	4
German (Ac. 306c) (a)	4
Geology (Eng. 441) (a)	2
History Lab'y (b) (Ac. 206) --	6
Military Science (Ac. 605) ----	1

(a) Education may be substituted for one language or for Geology.

(b) The student may substitute laboratory of any department of natural science for which he may be qualified.

COLLEGE OF ENGINEERING, MINES AND ARCHITECTURE.

The following studies in the freshman class are prescribed in the courses in civil, electrical, mechanical, mining and chemical engineering, and chemistry and metallurgy.

FRESHMAN CLASS.

First Term.

English (Ac. 102a, c)	5
History (Ac. 201)	2
Mathematics (Ac. 401)	5
Chemistry (Agr. 101)	4
Drawing (Eng. 601)	5
Mechanic Arts (Eng. 351)	6
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 102a, b)	5
History (Ac. 201)	2
Mathematics (Ac. 402)	5
Surveying (Eng. 102)	5
Chemistry (Agr. 101)	4
Drawing (Eng. 601)	5
Mechanic Arts (Eng. 352)	6
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 102a, b)	5
History (Ac. 201)	2
Mathematics (Ac. 402)	5
Surveying (Eng. 102)	5
Chemistry (Agr. 101)	4
Drawing (Eng. 601)	5
Mechanic Arts (Eng. 353)	6
Military Drill (Ac. 600)	3

CIVIL ENGINEERING.

Surveying (Eng. 105):

Forty-eight hours per week for four weeks immediately after commencement in summer camp.

SOPHOMORE CLASS

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
R. R. Surveying (Eng. 104)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
R. R. Surveying (Eng. 106)	4

Applied Mechanics (Eng. 312) 3
Descriptive Geometry (Eng. 602) 4

Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Higher Surveying (Eng. 103)	4
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4

Physics (Ac. 504)	3
Mechanic Arts (Eng. 305)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3
Surveying (Eng. 110):	Forty-eight hours per week for four weeks immediately after commencement in summer camp.

JUNIOR CLASS

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Engines and Boilers (Eng. 323)	3
Strength of Materials (Eng. 322)	3
Structural Drafting (Eng. 112)	6
*Machine Shop (Eng. 374)	
or Mineralogy (Eng. 431)	4
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Gas Engines (Eng. 324)	3
Roads and Pavements (Eng. 107)	5
Road Materials Lab'y. (Eng. 108)	4
Structural Drafting (Eng. 112)	6
*Machine Shop (Eng. 374)	
or Mineralogy (Eng. 432)	4
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5

Trans. Power (Eng. 325)	3
Roads and Pavements (Eng. 107)	5
Road and Street Improvements (Eng. 109)	4
Graphic Statics (Eng. 111)	6
*Machine Shop (Eng. 374)	
or Mineralogy (Eng. 433)	4
Military Tactics (Ac. 602)	1
Military Drill (Ac. 600)	3
*And Practical Mechanics (Eng. 321)	1

SENIOR CLASS.

First Term.

English (Ac. 108)	2
Physics (Ac. 505)	2
Geology (Eng. 441 or 436)	2
Theory of Structures (Eng. 113)	5
Railroad Engineering (Eng. 115) or Bacteriology (Vet. 118)	3
Bridge and Structural Design (Eng. 114)	9
Military Science (Ac. 603)	1
Technical Writing (Eng. 610)	3

Second Term.

Economics (Ac. 2)	2
Physics (Ac. 505)	2
Geology (Eng. 441 or 436)	2
Theoretical Hydraulics (Eng. 116)	5
Concrete and Masonry Construction (Eng. 118)	3
Military Science (Ac. 604)	1
Mechanical Engineering Lab. (Eng. 382)	4
Thesis (Eng. 120)	9

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Geology (Eng. 441 or 436)	3
Sanitary Engineering (Eng. 119)	5
Masonry and Concrete Construction (Eng. 118)	3
Practical Hydraulics (Eng. 117)	3
Bridge and Structural Design (Eng. 114)	9
Military Science (Ac. 605)	1

ELECTRICAL ENGINEERING.

SOPHOMORE CLASS

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2

Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Applied Mechanics (Eng. 312)	3
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 362)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Electrical Eng. (Eng. 201)	3
Electrical Meas. (Eng. 205)	1
Strength of Materials (Eng. 322)	3
Graphic Statics (Eng. 605)	2
Machine Design (Eng. 606)	3
Practical Mechanics (Eng. 321)	1
Electrical Lab'y. (Eng. 206)	4
Shop Work (Eng. 371)	6
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Electrical Eng. (Eng. 202)	3
Electrical Meas. (Eng. 205)	1
Kinematics (Eng. 604)	3
Machine Design (Eng. 606)	4
Practical Mechanics (Eng. 321)	1
Electrical Lab'y. (Eng. 207)	4
Shop Work (Eng. 371)	6
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Electrical Eng. (Eng. 203)	3
Electrical Tests (Eng. 205)	1
Kinematics (Eng. 604)	3
Machine Design (Eng. 606)	5
Practical Mechanics (Eng. 321)	1
Electrical Lab'y. (Eng. 208)	4
Shop Work (Eng. 371)	6
Military Tactics (Ac. 602)	1
Military Drill (Ac. 600)	3

SENIOR CLASS.

First Term.

English (Ac. 108)	2
Physics (Ac. 505)	2
Electrical Eng. (Eng. 210)	3
Electrical Lab'y. (Eng. 213)	4
Electrical Designing (Eng. 211)	2
Telephone Eng. (Eng. 215)	2
Telephone Lab'y (Eng. 216)	2
Thermodynamics (Eng. 331)	5
Mech. Eng. Lab'y (Eng. 381)	4
Machine Design (Eng. 607)	1
Machine Design (Eng. 609)	3
Military Science (Ac. 603)	1

Second Term.

Economics (Ac. 2)	2
Electrical Designing (Eng. 211)	2
Electrical Eng. (Eng. 211)	3
Electrical Lab'y (Eng. 213)	4
Physics (Ac. 505)	2
Telephone Eng. (Eng. 215)	2
Telephone Lab'y (Eng. 216)	2
Street Railways (a) (Eng. 214)	2
Power Plant Eng. (Eng. 332)	5
Mech. Eng. Lab. (Eng. 382)	4
Machine Design (Eng. 607)	1
Machine Design (Eng. 609)	3
Military Science (Ac. 604)	1

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Electrical Eng. (Eng. 212)	5
Electrical Eng. Lab. (Eng. 213)	4
Street Railways (Eng. 214)	2
Specifications and Contracts (Eng. 219)	2
Power Plant Eng. (Eng. 332)	5
Mech. Eng. Lab. (Eng. 383)	4
Machine Design (Eng. 607)	1
Machine Design (Eng. 609)	3
Military Science (Ac. 605)	1

(a) Course Eng. 333 may be substituted.

MECHANICAL ENGINEERING.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Shop Work (Eng. 362)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Strength of Materials (Eng. 322)	3
Graphic Statics (Eng. 605)	2
Machine Design (Eng. 606)	3
Electrical Eng. (Eng. 201)	3
Electrical Meas. (Eng. 205)	1
Elec. Eng. Lab'y (Eng. 206)	4
Practical Mechanics (Eng. 321)	1
Shop Work (Eng. 371)	6
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Kinematics (Eng. 604)	3
Machine Design (Eng. 606)	5
Electrical Eng. (Eng. 202)	3
Electrical Meas. (Eng. 205)	1
Elec. Eng. Lab'y (Eng. 207)	4

Practical Mechanics (Eng. 321)	1
Shop Work (Eng. 371)	6
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Kinematics (Eng. 604)	3
Machine Design (Eng. 606)	5
Electrical Eng. (Eng. 203)	3
Electrical Tests (Eng. 205)	1
Elec. Eng. Lab'y (Eng. 208)	4
Practical Mechanics (Eng. 321)	1
Shop Work (Eng. 371)	4
Laboratory (Eng. 377)	2
Military Tactics (Ac. 602)	1
Military Drill (Ac. 600)	3

*SENIOR CLASS**First Term.*

English (Ac. 108)	2
Physics (Ac. 505)	2
Electrical Eng. (a) (Eng. 217)	3
Heating and Ventilating (Eng. 334)	2
Thermodynamics (Eng. 331)	5
Machine Design (Eng. 607)	1
Machine Design (Eng. 608)	6
Elec. Eng. Lab'y (Eng. 218)	4
Mech. Eng. Lab'y (Eng. 381)	4
Technical Writing (Eng. 610)	3
Military Science (Ac. 603)	1

Second Term.

Economics (Ac. 2)	2
Physics (Ac. 505)	2
Hydraulic Power (Eng. 333)	5
Power Plant Eng. (Eng. 332)	5
Refrigeration (Eng. 336)	2
Machine Design (Eng. 607)	1
Machine Design (Eng. 608)	6
Mech. Eng. Lab'y. (Eng. 382)	4
Thesis (Eng. 384)	2
Military Science (Ac. 604)	1

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Power Plant Eng. (Eng. 332)	5
Metallurgy (Agr. 104b)	3
Contracts and Specifications (Eng. 219)	2
Refrigeration (Eng. 336)	2
Machine Design (Eng. 607)	1
Machine Design (Eng. 608)	6
Mech. Eng. Lab'y (Eng. 383)	4
Thesis (Eng. 384)	4
Military Science (Ac. 605)	1

(a) Course 113 in civil engineering may be substituted.

MINING ENGINEERING

Surveying (Eng. 105)
 Forty-eight hours per week for four weeks immediately after commencement in summer camp.

*SOPHOMORE CLASS.**First Term.*

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
R. R. Surveying (Eng. 104)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	4
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Applied Mechanics (Eng. 312)	3
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 362)	5
Physical Laboratory (Ac. 502)	2
Military Drill (Ac. 600)	3

*JUNIOR CLASS.**First Term.*

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Mine Surveying (Eng. 401)	5
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mineralogy Laboratory (Eng. 431)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mining Engineering (Eng. 402)	5
Mineralogy Laboratory (Eng. 432)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Mathematics (Ac. 405)	5
Geology (Eng. 435)	2
Drawing (Eng. 403)	4
Mining Engineering (Eng. 402)	5
Mineralogy Laboratory (Eng. 433)	4
Chemical Lab'y (Agr. 110a)	6
Practical Mechanics (Eng. 321)	1
Military Tactics (Ac. 601)	1
Military Drill (Ac. 600)	3

Summer Course, Engineering 404. Taken immediately after commencement.

SENIOR CLASS.

First Term.

English (Ac. 108)	2
Physics (Ac. 505)	2
Economic Geology (Eng. 442)	2
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104)	3
Drawing (Eng. 412)	3
Military Science (Ac. 603)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3

Second Term.

Economics (Ac. 2)	2
Physics (Ac. 505)	2
Hydraulics (Eng. 110)	5
Mining Engineering (Eng. 411)	3
Electrical Eng. (Eng. 204)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104)	3
Drawing (Eng. 412)	3
Military Science (Ac. 604)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3

Third Term.

Economics (Ac. 2)	2
Astronomy (Ac. 506)	2
Economic Geology (Eng. 443)	2
Mining Engineering (Eng. 411)	3

Electrical Eng. (Eng. 204a)	2
*Machine Shop (Eng. 374)	4
Metallurgy (Agr. 104b)	3
Drawing (Eng. 412)	3
Military Science (Ac. 605)	1
Assaying (Agr. 110d)	8
Metallurgical Lab'y (Eng. 413)	3
*Electrical laboratory may be substituted.	

CHEMICAL ENGINEERING.

SOPHOMORE CLASS.

First Term.

English (Ac. 103a)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Mechanic Arts (Eng. 361)	4
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 103c)	3
History (Ac. 202)	2
Mathematics (Ac. 403)	5
Descriptive Geometry (Eng. 602)	4

Physics (Ac. 504)	3
Applied Mech. (Eng. 312)	3
Mechanic Arts (Eng. 362)	4
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 103c)	3
Mathematics (Ac. 404)	5
Desc. Geometry (Eng. 602)	4
Physics (Ac. 504)	3
Applied Mechanics (Eng. 312)	3
Mechanic Arts (Eng. 362)	5
Chem. Laboratory (Agr. 110a)	6
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 431)	4
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 432)	4
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107) or French or German	3
Mathematics (Ac. 405)	5
Organic Chemistry (Agr. 103a)	2
Industrial Chem. (Agr. 102a)	4
Geology (Eng. 435)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 433)	4
Military Drill (Ac. 600)	3

SENIOR CLASS

First Term.

English (Ac. 108)	2
Physical Chem. (Agr. 108)	2
German or French	3
Economic Geology (Eng. 442)	2
Metallurgy (Agr. 104)	3
Theoretical Chem. (Agr. 107)	2
Electrical Eng. (Eng. 204)	2
Military Science (Ac. 603)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Chemical Lab'y (Org. Agr. 110f)	4
Metallurgical Lab'y (Eng. 413)	3

Second Term.

Economics (Ac. 2)	2
Physical Chem. (Agr. 108)	2
German or French	3
Metallurgy (Agr. 104)	3
Electrical Eng. (Eng. 204)	2
Gas Engines (Eng. 324)	2
Engineering Chem. (Agr. 106)	2
Military Science (Ac. 604)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Chemical Lab'y (Org. Agr. 110f)	4
Metallurgical Lab'y (Eng. 413)	3

Third Term.

Economics (Ac. 2)	2
Physical Chem. (Agr. 108)	2
German or French	3

Economic Geology (Eng. 443)	2
Metallurgy (Agr. 104b)	3
Electrical Eng. (Eng. 204a)	2
Engineering Chem. (Agr. 106)	2
Military Science (Ac. 605)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Chemical Lab'y (Org. Agr. 110f)	4
Metallurgical Lab'y (Eng. 413)	3

CHEMISTRY AND
METALLURGY

SOPHOMORE CLASS

Students in the Sophomore class in this course may take either the course prescribed for sophomore students in chemical engineering or that prescribed for students pursuing the General Course.

JUNIOR CLASS

First Term.

English (Ac. 107)	3
Organic Chemistry (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Advanced Inorganic Chem- istry (Agr. 111)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 431)	4
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 107)	3
Organic Chem. (Agr. 103a)	3
Industrial Chem. (Agr. 102a)	3
Geology (Eng. 435)	2
Advanced Inorganic Chem- istry (Agr. 111)	2
Military Science (Ac. 601)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 432)	4
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 107)	3
Organic Chem. (Agr. 103a)	2
Industrial Chem. (Agr. 102a)	4
Geology (Eng. 435)	2
Advanced Inorganic Chem- istry (Agr. 111)	2
Military Science (Ac. 602)	1
Chemical Lab'y (Quant. Agr. 110b)	9
Mineralogy Lab'y (Eng. 433)	4
Military Drill (Ac. 600)	3

SENIOR CLASS.

First Term.

English (Ac. 108)	2
Physical Chem. (Agr. 108)	2
German or French	3
Economic Geology (Eng. 442)	2
Metallurgy (Agr. 104)	3
Theoretical Chem. (Agr. 107)	2
Bacteriology (Vet. 118)	6
Military Science (Ac. 603)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Metallurgical Lab'y (Eng. 413)	3

Second Term.

Economics (Ac. 2)	2
Physical Chemistry (Agr. 108)	2
German or French	3
Metallurgy (Agr. 104)	3
Engineering Chem. (Agr. 106)	2
Bacteriology (Vet. 118)	6
Military Science (Ac. 604)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Metallurgical Lab'y (Eng. 413)	3

Third Term.

Economics (Ac. 2)	2
Physical Chemistry (Agr. 108)	2
German or French	3
Economic Geology (Eng. 443)	2
Metallurgy (Agr. 104b)	3
Engineering Chem. (Agr. 106)	2
Military Science (Ac. 605)	1
Chemical Lab'y and Assaying (Agr. 110c)	9
Chemical Lab'y (Org. Agr. 110f)	6
Metallurgical Lab'y (Eng. 412)	3

TWO-YEAR COURSE IN
APPLIED ELECTRICITY

FIRST YEAR.

First Term.

English (special course)	5
Mathematics (special course)	5
Electrical Eng. (Eng. 204)	3
Engines and Boilers (Eng. 323)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 206)	4
Shop Work (Eng. 361)	4
Power Plant (Eng. 220)	4

Second Term.

English (special course)	5
Mathematics (special course)	5
Electrical Eng. (Eng. 204)	3
Gas Engines (Eng. 324)	3

Drawing (Eng. 601)	5
Shop Work (Eng. 362)	4
Power Plant (Eng. 220)	4

Third Term.

English (special course)	5
Mathematics (special course)	5
Electrical Eng. (Eng. 205)	3
Trans. Power (Eng. 325)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 208)	4
Shop Work (Eng. 362)	4
Power Plant (Eng. 220)	4

SECOND YEAR

First Term.

English (special course)	3
Mathematics (Ac. 401)	5
Electrical Eng. (Eng. 217)	4
Kinematics (Eng. 604)	3
Practical Mech. (Eng. 321)	1
Drawing (Eng. 606)	4
Electrical Lab'y (Eng. 218)	4
Shop Work (Eng. 362)	4
Power House (Eng. 220)	4

Second Term.

English (special course)	3
Electrical Eng. (Eng. 217a)	4
Applied Mechanics (Eng. 312)	3
Practical Mechanics (Eng. 321)	1
Drawing (Eng. 606)	4
Electrical Lab'y (Eng. 218a)	4
Mech. Lab'y (Eng. 378)	3
Shop Work (Eng. 374)	4
Power House (Eng. 220)	4

Third Term.

English (special course)	3
Street Railways (Eng. 214)	2
Electrical Eng. (Eng. 217b)	4
Applied Mechanics (Eng. 312)	3
Practical Mechanics (Eng. 321)	1
Drawing (Eng. 606)	4
Electrical Lab'y (Eng. 218b)	4
Shop Work (Eng. 374)	4
Power House (Eng. 220)	4

SPECIAL COURSE FOR ROAD
FOREMEN AND INSPECTORS

First Term.

Mathematics (special course)	5
Drawing (Eng. 601)	5
Surveying (Eng. 102)	5
Roads and Pavements (special course)	3
Mechanic Arts (Eng. 351 or 361)	6

Second Term.

Mathematics (special course) ..	5
Drawing (Eng. 601)	5
Surveying (Eng. 102)	5
Roads and Pavements (special course)	3
Road Materials Lab'y (Eng. 108)	3
Mechanic Arts (Eng. 352 or 362)	6

Third Term.

Mathematics (special course) ..	5
Drawing (Eng. 601)	5
Surveying (Eng. 102)	5
Roads and Pavements (special course)	3
Road and Street Improve- ments (Eng. 109)	3

SPECIAL ONE-YEAR COURSE
IN WIRELESS TELEGRAPHY.*First Term.*

English (special course)	5
Mathematics (special course) ..	5
Electrical Eng. (Eng. 204)	3
Engines and Boilers (Eng. 323)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 206)	4
Shop Work (Eng. 361)	4
Wireless Telegraphy (Eng. 221)	4

Second Term.

English (special course)	5
Mathematics (special course) ..	5
Electrical Eng. (Eng. 204)	3
Gas Engines (Eng. 324)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 207)	4
Shop Work (Eng. 362)	4
Wireless Telegraphy (Eng. 221)	4

Third Term.

English (special course)	5
Mathematics (special course) ..	5
Electrical Eng. (Eng. 205)	3
Trans. Power (Eng. 325)	3
Drawing (Eng. 601)	5
Electrical Lab'y (Eng. 208)	4
Shop Work (Eng. 362)	4
Wireless Telegraphy (Eng. 221)	4

TWO-YEAR MINING COURSE.

FIRST YEAR

First Term.

English (special course)	5
Mathematics (Ac. 401)	5
Mining (Eng. 401)	5
Mineralogy (Eng. 431)	4
Drawing (Eng. 601)	5
Military Drill (Ac. 600)	3

Second Term.

English (special course)	5
Mathematics (Ac. 402)	5
Mining (Eng. 402)	5
Surveying (Eng. 102)	5
Mineralogy (Eng. 432)	4
Drawing (Eng. 601)	5
Military Drill (Ac. 600)	3

Third Term.

English (special course)	5
Mathematics (Ac. 402)	5
Mining (Eng. 402)	5
Surveying (Eng. 103)	5
Mineralogy (Eng. 433)	4
Drawing (Eng. 601)	5
Military Drill (Ac. 600)	3

SECOND YEAR.

First Term.

English (special course)	3
Mining (Eng. 411)	3
Elec. Eng. (Eng. 204)	3
Surveying (Eng. 104)	5
Eng. Geology (Eng. 436)	2
Practical Mech. (Eng. 321)	1
Shop Work (Eng. 361)	4
Electrical Lab'y	4
Drawing	4
Military Drill (Ac. 600)	3

Second Term.

English (special course)	3
Mining (Eng. 411)	3
Elec. Eng. (Eng. 204)	3
Applied Mech. (Eng. 312)	3
Eng. Geology (Eng. 436)	2
Practical Mech. (Eng. 321)	1
Shop Work (Eng. 362)	4
Electrical Lab'y	4
Drawing	4
Military Drill (Ac. 600)	3

Third Term.

English (special course) -----	3
Mining (Eng. 411) -----	3
Elec. Eng. (Eng. 217b) -----	4
Applied Mech. (Eng. 312) -----	3
Eng. Geology (Eng. 436) -----	2
Practical Mech. (Eng. 321) -----	1
Shop Work (Eng. 362) -----	4
Electrical Lab'y -----	4
Drawing -----	4
Military Drill (Ac. 600) -----	3

ARCHITECTURE.

FRESHMAN CLASS.

First Term.

English (Ac. 102a) -----	3
History (Ac. 201) -----	2
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Freehand Drawing (Arch. 11) -----	4
Descriptive Geometry (Eng. 602) -----	4
Shades and Shadows (Arch. 15) -----	3
Elements of Architecture (Arch. 19) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Freehand Drawing (Arch. 11) -----	4
Descriptive Geometry (Eng. 602) -----	4
Surveying (Eng. 102) -----	5
Elements of Architecture (Arch. 19) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Freehand Drawing (Arch. 11) -----	4
Perspective (Arch. 17) -----	3
Descriptive Geometry (Eng. 602) -----	4
Elements of Architecture (Arch. 19) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Physics (Ac. 504) -----	3
History or Architecture (Arch. 21) -----	3
Charcoal Drawing (Arch. 25) -----	6
Architectural Design (Arch. 29) -----	12
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103b) -----	3
History (Ac. 202) -----	2
Mathematics (Ac. 403) -----	5
Physics (Ac. 504) -----	3
History of Architecture (Arch. 21) -----	3
Charcoal Drawing (Arch. 25) -----	6
Architectural Design (Arch. 29) -----	12
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 103c) -----	3
Mathematics (Ac. 404) -----	5
Physics (Ac. 504) -----	3
History of Architecture (Arch. 21) -----	3
Charcoal Drawing (Arch. 25) -----	6
Pen and Ink Rendering (Arch. 27) -----	4
Architectural Design (Arch. 29) -----	12
Military Drill (Ac. 600) -----	3

JUNIOR CLASS

First Term.

History of Architecture (Arch. 31) -----	3
Mathematics (Ac. 405) -----	5
French (Ac. 301a) -----	4
Building Construction, Masonry (Arch. 33) -----	3
Strength of Materials (Eng. 322) -----	3
Water Color Painting (Arch. 37) -----	4
Architectural Design (Arch. 39) -----	12
Military Science (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

History of Architecture (Arch. 31) -----	3
Mathematics (Ac. 405) -----	5
French (Ac. 301b) -----	3

Building Construction, Carpentry (Arch. 34)	3
Applied Mechanics (Eng. 312)	3
Water Color Painting (Arch. 37)	4
Architectural Design (Arch. 39)	12
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

Historic Ornament (Arch. 32)	3
Mathematics (Ac. 405)	5
French (Ac. 301c)	4
Plumbing and Drainage (Arch. 35)	3
Applied Mechanics (Eng. 312)	3
Graphic Statics (Eng. 111)	5
Working Drawings (Arch. 38)	12
Military Science (Ac. 602)	1
Military Drill (Ac. 600)	3

SENIOR CLASS.

First Term.

History of Painting (Arch. 42)	1
French (Ac. 302a)	4
Heating and Ventilation (Eng. 334)	2
Steel Frame Construction (Eng. 113a)	2
Life Class (Arch. 46)	6
Architectural Design (Arch. 49)	24
Military Science (Ac. 603-605)	1

Second Term.

History of Sculpture (Arch. 43)	1
French (Ac. 302b)	3
Economics (Ac. 2)	2
Reinforced Concrete (Eng. 118)	3
Life Class (Arch. 46)	6
Architectural Design (Arch. 49)	24
Military Science (Ac. 603-605)	1

Third Term.

Professional Practice (Arch. 44)	1
French (Ac. 302c)	4
Economics (Ac. 2)	2
Wiring and Illumination (Eng. 209)	2
Clay Modeling (Arch. 47)	3
Architectural Design (Arch. 49)	24
Military Science (Ac. 603-605)	1

ARCH. ENGINEERING.

JUNIOR CLASS.

First Term.

History of Architecture (Arch. 31)	3
Mathematics (Ac. 405)	5
Building Construction, Masonry (Arch. 33)	3
Geology (Eng. 436)	2
Electricity and Magnetism (Eng. 204)	2
Engines and Boilers (Eng. 323)	3
Strength of Materials (Eng. 322)	3
Structural Drafting (Eng. 112)	6
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

Second Term.

History of Architecture (Arch. 31)	3
Mathematics (Ac. 405)	5
Building Construction, Carpentry (Arch. 34)	3
Geology (Eng. 436)	2
Electricity and Magnetism (Eng. 204)	2
Gas Engines (Eng. 324)	3
Applied Mechanics (Eng. 312)	3
Structural Drafting (Eng. 112)	6
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

Third Term.

Plumbing and Drainage (Arch. 35)	3
Mathematics (Ac. 405)	5
Wiring and Illuminating (Eng. 209)	2
Geology (Eng. 436)	2
Dynamo Electric Machinery (Eng. 204a)	2
Transmission of Power (Eng. 325)	3
Applied Mechanics (Eng. 312)	3
Graphic Statics (Eng. 111)	5
Military Science (Ac. 601)	1
Military Drill (Ac. 600)	3

SENIOR CLASS

First Term.

Heating and Ventilation (Eng. 334)	2
Theory of Structures (Eng. 113)	5
Structural Design (Eng. 114)	9
Technical Writing (Eng. 610)	3

Water Color Painting (Arch. 37), or Elective	4
Architectural Design (Arch. 48)	16
Military Science (Ac. 603-605)	1

Second Term.

Reinforced Concrete (Eng. 118)	3
Economics (Ac. 2)	2
Testing Laboratory (Eng. 382)	4
Hydraulics (Eng. 116)	5
Roads and Pavements (Eng. 107)	5
Architectural Design (Arch. 48)	16
Military Science (Ac. 603-605)	1

Third Term.

Professional Practice (Arch. 44)	1
Economics (Ac. 2)	2
Foundations (Eng. 118)	3
Sanitary Engineering (Eng. 119)	5
Structural Design (Eng. 114)	9
Architectural Design (Arch. 48)	16
Military Science (Ac. 603-605)	1

**TWO-YEAR SPECIAL COURSE
IN ARCHITECTURE.**

FIRST YEAR.

First Term.

History of Architecture (Arch. 21)	3
Mathematics (Ac. 401)	5
Building Construction, Mason- ry (Arch. 33)	3
Freehand Drawing (Arch 11)	4
Descriptive Geometry (Eng. 602)	4
Shades and Shadows (Arch. 13)	3
Architectural Design (Arch. 29)	12
Military Drill (Ac. 600)	3

Second Term.

History of Architecture (Arch. 21)	3
Building Construction, Carpen- try (Arch. 34)	3
Freehand Drawing (Arch. 11)	4
Charcoal Drawing (Arch. 25)	6
Descriptive Geometry (Eng. 602)	4

Surveying (Eng. 102)	5
Architectural Design (Arch. 29)	12
Military Drill (Ac. 600)	3

Third Term.

History of Architecture (Arch. 21)	3
Plumbing and Drainage (Arch. 35)	3
Charcoal Drawing (Arch. 25)	6
Pen and Ink Rendering (Arch. 27)	4
Descriptive Geometry (Eng. 602)	4
Perspective (Arch. 15)	3
Architectural Design (Arch. 29)	12
Military Drill (Ac. 600)	3

SECOND YEAR.

First Term.

History of Architecture (Arch. 31)	3
History of Painting (Arch. 42)	1
Heating and Ventilation (Eng. 334)	2
Water Color Painting (Arch. 37)	4
Life Class (Arch. 46)	6
Architectural Design (Arch. 49)	24
Military Drill (Ac. 600)	3

Second Term.

History of Architecture (Arch. 31)	3
History of Sculpture (Arch. 43)	1
Economics (Ac. 2)	2
Water Color Painting (Arch. 37)	4
Life Class (Arch. 46)	6
Architectural Design (Arch. 49)	24
Military Drill (Ac. 600)	3

Third Term.

Historic Ornament (Arch. 32)	3
Professional Practice (Arch. 44)	1
Economics (Ac. 2)	2
Wiring and Illumination (Eng. 209)	2
Clay Modeling (Arch. 47)	6
Architectural Design (Arch. 49)	24
Military Drill (Ac. 600)	3

COLLEGE OF AGRICULTURAL SCIENCES

AGRICULTURE
FRESHMAN CLASS.*First Term.*

English (Ac. 102a, c) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Mathematics (Ac. 402) -----	5
Surveying (Eng. 102) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) -----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

English (Ac. 103a) -----	3
History (Ac. 202) -----	2
Corn (Agr. 202) -----	4
Zoology (Agr. 701) -----	6
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Organic Chemistry (Agr. 103b) -----	3
Stock Judging (Agr. 802) -----	2
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 103c) -----	3
History (Ac. 202) -----	2
Zoology (Agr. 701) -----	5
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Stock Judging (Agr. 803) -----	4
Farm Accounts (Agr. 203) -----	2
Organic Chemistry (Agr. 103b) -----	3
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 103c) -----	3
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Horticulture (Agr. 601) -----	6

Agriculture (Agr. 203) -----	4
Agricultural Chem. (Agr. 105) -----	4
Chemical Lab'y (Agr. 110a) -----	6
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

First Term.

English (a) (Ac. 107) -----	3
Dairying (Agr. 804) -----	4
Agr. Bacteriology (Agr. 303) -----	6
*Veterinary Science (a) (Vet. 102) -----	5

Drainage (Agr. 520) -----	4
Horticulture (Agr. 602) -----	2
Chemical Lab'y (a) (Agr. 110b) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Second Term.

English (a) (Ac. 107) -----	3
Botany (Agr. 304) -----	6
*Veterinary Science (a) (Vet. 102) -----	5

An. Husbandry (Agr. 805) -----	4
Horticulture (Agr. 603, 604) -----	6
Geology (Eng. 434) -----	4
Chemical Lab'y (a) (Agr. 110b) -----	6
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

English (a) (Ac. 107) -----	3
Botany (Agr. 304) -----	6
*Veterinary Science (a) (Vet. 102) -----	5

Animal Husbandry (Agr. 806) -----	4
Agriculture (Agr. 205) -----	4
Horticulture (Agr. 603) -----	4
Chemical Lab'y (a) (Agr. 110b) -----	6
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3

(a) Education or a modern language may be substituted.

*Veterinary Science is required of students who specialize in animal husbandry.

SENIOR CLASS.

The studies of the course in Agriculture are divided into five groups, as follows:

- Group "A," agronomy: Gives special prominence to crops, soils, and farm machinery.
- Group "B," horticulture: Gives special reference to fruit growing, trucking, greenhouse management, and landscape gardening.
- Group "C," animal husbandry: Gives special prominence to

all work pertaining to live stock.

Group "D," agricultural chemistry: Especially designed to prepare students for experiment station and fertilizer control work.

Group "E," botany: Designed to train students for station work or to pursue advanced work in botany.

The elective work in each group must be approved at the beginning of the senior year by the president and the professor in charge, and with the required work must aggregate at least twenty-one hours, counting two hours laboratory equal to one hour. At least nineteen hours of this work must be taken in each term; and the maximum for any term is a total of twenty-five such hours in all classes, except by special permission of the faculty.

The giving of an elective course will be optional with the professor in charge unless it be elected by at least four students.

ELECTIVES FOR SENIOR GROUPS

First Term.

Cotton (Agr. 206)	4
Animal Husbandry (Agr. 807, 808)	6
Horticulture (Agr. 605)	5
Canning (Agr. 606)	3
Botany (Agr. 305)	6
Vet. Science (Agr. 102)	5
Industrial Chem. (Agr. 102a)	3
French (Ac. 302a)	4
Physics (Ac. 505)	2
Chemical Lab'y (Agr. 110b)	6
Mathematics (Ac. 403 & 404, or 405)	5
Education	3

Second Term.

Agriculture (Agr. 207)	4
Animal Husbandry (Agr. 808, 809, 811, 813)	5
Horticulture (Agr. 605, 606)	5
Botany (Agr. 305)	6
Botany (Agr. 306)	6
Vet. Science (Agr. 102)	5
Industrial Chem. (Agr. 102a)	3
French (Ac. 302b)	3
Chemical Lab'y (Agr. 110b)	6

Mathematics (Ac. 403 & 404, or 405)	5
Forestry (Agr. 608)	5
Education	3
Farm Engines (Agr. 521)	2

Third Term.

Agriculture (Agr. 208)	4
Animal Husbandry (Agr. 810, 818)	4
Horticulture (Agr. 605, 609)	7
Botany (Agr. 307)	6
Vet. Science (Agr. 102)	5
Industrial Chem. (Agr. 102a)	3
French (Ac. 302c)	4
Chemical Lab'y (Agr. 110)	6
Mathematics (Ac. 403 & 404, or 405)	5
Education	3

REQUIRED SUBJECTS

SENIOR GROUPS

GROUP "A" AGRONOMY.

First Term.

Agr. and Agr. Lab. (Agr. 206)	4
Entomology (Agr. 702)	5
Military Science (Ac. 603)	1
Soils and Soils Lab'y (Agr. 211)	5
German (a) (Ac. 305a)	4
Thesis (Agr. 209)	

Second Term.

Agriculture (Agr. 207)	2
Farm Machinery (Agr. 522)	2
Forestry (Agr. 608)	5
Military Science (Ac. 604)	1
Soils and Soils Lab'y (Agr. 211)	5
German (a) (Ac. 305b)	3
Thesis (Agr. 209)	

Third Term.

Agr. and Agr. Lab. (Agr. 208)	4
Entomology (Agr. 703)	5
Military Science (Ac. 605)	1
Soils and Soils Lab'y (Agr. 211)	5
German (a) (Ac. 305c)	4
Thesis (Agr. 209)	

(a) French may be substituted.

Electives: The additional work is to be selected from the elective subjects listed.

GROUP "B," HORTICULTURE.

First Term.

Horticulture (Agr. 605, 606)	8
Entomology (Agr. 702)	5
Military Science (Ac. 603)	1
Botany (Agr. 305)	6
Soils (Agr. 211)	5
German (a) (Ac. 306a)	4
Thesis (Agr. 611)	

Second Term.

Horticulture (Agr. 605, 607) ..	8
Forestry (Agr. 608)	4
Military Science (Ac. 604)	1
Botany (Agr. 305)	6
Soils (Agr. 211)	5
German (a) (Ac. 306b)	3
Thesis (Agr. 610)	

Third Term.

Horticulture (Agr. 605, 609) ..	7
Entomology (Agr. 703)	5
Military Science (Ac. 605)	1
Soils (Agr. 211)	5
German (a) (Ac. 306c)	4
Thesis (Agr. 610)	

(a) French or English and Political Economy and one additional subject may be substituted.

Electives: The additional work is to be selected from the elective subjects listed above.

GROUP "C,"

ANIMAL HUSBANDRY

Animal Hus. (Agr. 807, 808, 812)	7
Animal Hus. Lab'y (Agr. 812) ..	2
Entomology (Agr. 702)	5
Military Science (Ac. 603)	1
Soils and Soils Lab'y (Agr. 211) ..	5
German (a) (Ac. 306a)	4
Thesis	

Second Term.

Animal Hus. (Agr. 808, 812, 813)	6
Animal Hus. Lab'y (Agr. 809, 811, 812)	6
Military Science (Ac. 604)	1
Soils and Soils Lab'y (Agr. 211) ..	5
German (a) (Ac. 306b)	3
Thesis	

Third Term.

Animal Hus. (Agr. 808, 810, 812)	6
Animal Hus. Lab'y (Agr. 812) ..	2
Entomology (Agr. 703)	5
Military Science (Ac. 605)	1
Soils and Soils Lab'y (Agr. 211) ..	5
German (a) (Ac. 306c)	4
Thesis	

(a) French may be substituted.
Electives: The additional work is to be selected from the elective subjects listed above or from the course in Veterinary Medicine.

GROUP "D," AGRICULTURAL CHEMISTRY.

First Term.

Chemical Lab'y (Agr. 110)	6
Entomology (Agr. 702)	5
Military Science (Ac. 603)	1
German (a) (Ac. 306a)	3
Thesis	

Second Term.

Chemical Lab'y (Agr. 110)	6
Forestry (Agr. 608)	5
Military Science (Ac. 604)	1
German (a) (Ac. 306b)	3
Thesis	

Third Term.

Chemical Lab'y (Agr. 110)	6
Entomology (Agr. 703)	5
Military Science (Ac. 605)	1
German (a) (Ac. 306c)	4
Thesis	

(a) French may be substituted.
Electives: The additional work is to be selected from the elective subjects listed above.

GROUP "E," BOTANY

First Term.

German (a) (Ac. 306a)	4
Botany (Agr. 305)	6
Soils and Soils Lab'y (Agr. 211) ..	5
Entomology (Agr. 702)	5
Military Science (Ac. 603)	1
Thesis	

Second Term.

German (a) (Ac. 306b)	3
Botany (Agr. 305 or 306)	6
Soils and Soils Lab'y (Agr. 211) ..	5
Forestry and Forestry Lab'y (Agr. 609)	5
Military Science (Ac. 604)	1
Thesis	

Third Term.

German (a) (Ac. 306c)	4
Botany (Agr. 307)	6
Soils and Soils Lab'y (Agr. 211) ..	5
Entomology (Agr. 703)	5
Military Science (Ac. 605)	1
Thesis	

(a) French may be substituted.
Electives: The equivalent of at least six hours from the subjects listed, subject to the direction of the professor.

TWO-YEAR COURSE IN AGRICULTURE

Continuation in any subject is conditioned upon satisfactory progress in that subject.

FIRST YEAR.

First Term.

English	5
Chemistry (Agr. 101)	4
Veterinary Science (Vet. 102)	5
Mechanic Arts (Eng. 351)	6
Corn (Agr. 202)	4
Dairying (Agr. 804)	4
Landscape Gardening (Agr. 602)	2
Judging Beef Cattle (Agr. 802)	2
Military Drill (Ac. 600)	3

Second Term.

English	5
Chemistry (Agr. 101)	4
Veterinary Science (Vet. 102)	5
Mechanic Arts (Eng. 352)	6
Vegetable Gardening (Agr. 603)	4
Orchard Technique (Agr. 604)	2
Judging Dairy Cattle (Agr. 803)	4
Meats (Agr. 809)	2
Farm Accounts (Agr. 203)	2
Military Drill (Ac. 600)	3

Third Term.

English	5
Chemistry (Agr. 101)	4
Veterinary Science (Vet. 102)	5
Mechanic Arts (Eng. 353)	6

Principles of Plant Culture

(Agr. 601)	2
Vegetable Gardening (Agr. 603)	4
Small Grains (Agr. 204)	4
Military Drill (Ac. 600)	3

SECOND YEAR.

First Term.

Principles of Breeding (Agr.

807)	2
Canning (Agr. 606)	3
Pomology (Agr. 605)	5
Zoology (Agr. 701)	6
Cotton (Agr. 206)	4
Entomology (Agr. 702)	5
Soils (Agr. 211)	5
Military Drill (Ac. 600)	3

Second Term.

Orchard Technique (Agr. 604)	2
Forestry (Agr. 608)	5
Miscellaneous Crops (Agr. 207a)	2

Swine Judging (Agr. 805)	4
Zoology (Agr. 701)	6
Soils (Agr. 211)	5
Pomology (Agr. 605)	5
Military Drill (Ac. 600)	3

Third Term.

Pomology (Agr. 605)	5
Sheep Judging (Agr. 806)	5
Poultry (Agr. 810)	2
Soils (Agr. 211)	5
Entomology (Agr. 703)	5
Farm Management (Agr. 208)	4
Forage Crops (Agr. 205)	4
Terracing and Drainage (Agr. 214)	2
Military Drill (Ac. 600)	3

DEPARTMENT OF PHARMACY

TWO-YEAR COURSE IN PHARMACY.

FIRST YEAR.

First Term.

English (a) (special course)	3
Chemistry (Agr. 101)	4
Physiology (Vet. 101)	2
Pharmacy (Agr. 401a)	3
Botany (Agr. 301)	6
Pharmaceutical Lab'y (Agr. 401b)	3
Chemical Lab'y (Agr. 110a)	6
Military Drill (Ac. 600)	3

Second Term.

English (a) (special course)	3
Chemistry (Agr. 101)	4
Physiology (Vet. 101)	2
*Pharmacy (Agr. 401a)	3

Pharmacognosy (Agr. 402)	4
Botany (Agr. 301)	6
Chemical Lab'y (Agr. 110a)	6
Pharmaceutical Laboratory (Agr. 401b)	8
Military Drill (Ac. 600)	3

Third Term.

English (a) (special course)	3
Botany (Agr. 301)	6
Chemistry (Agr. 101)	4
Phar. Chem. (Agr. 406)	3
Physiology (Vet. 101)	2
Pharmacognosy (Agr. 402)	4
Chemical Lab'y (Agr. 110a)	6
Military Drill (Ac. 600)	3
(a) Latin may be substituted.	
*Substitute Phar. Chem. (Agr. 406) latter half term.	

SECOND YEAR.

First Term.

Pharmacy (Agr. 403a)	3
Adv. Pharmacog. (Agr. 404)	4
Pharmaceutical Laboratory (Agr. 403b)	12
Organic Chem. (Agr. 103a)	2
Chemical Lab'y (Agr. 110c)	6
Bacteriology (Vet. 108)	6
Military Drill (Ac. 600)	3

Second Term.

Pharmacy (Agr. 403a)	3
*Adv. Pharmacog. (Agr. 404)	4
Alkaloidal Assay (Agr. 403c)	9
Organic Chem. (Agr. 103a)	2
Chemical Lab'y (Agr. 110c)	6
Bacteriology (Vet. 108)	6
United States Phar. (Agr. 407)	3
xPharmacology (Vet. 120)	3
Military Drill (Ac. 600)	3

Third Term.

Pharmacy (Agr. 403a)	3
Prescriptions (Agr. 405)	3
United States Phar. (Agr. 407)	3
Pharmacology (Vet. 120)	3
Prescription Laboratory (Agr. 403d)	4
Pharmaceutical Testing and Drug Analysis (403e)	6
Organic Chem. (Agr. 103a)	2
Toxicology (Agr. 110e)	7
Military Drill (Ac. 600)	3
xSubstitute for Bacteriology in latter half second term.	

*Substitute Prescriptions (Agr. 405) latter half second term.

THREE-YEAR COURSE
IN PHARMACY

FIRST YEAR.

First Term.

English (Ac. 102a)	3
Latin (Ac. 209)	3
Chemistry (Agr. 101)	4
Pharmacy Lab'y (Agr. 401b)	8
Pharmacy (Agr. 401a)	3
Physiology (Vet. 101)	2
Chemical Lab'y (Agr. 110a)	6
Military Drill (Ac. 600)	3

Second Term.

English (Ac. 102b)	3
Latin (Ac. 209)	4
Chemistry (Agr. 101)	4
xPharmacy (Agr. 401a)	3
Physiology (Vet. 101)	2
Pharmacy Lab'y (Agr. 401b)	8
Chemical Lab'y (Agr. 110a)	6
Military Drill (Ac. 600)	3

Third Term.

English (Ac. 102b)	3
Latin (Ac. 209)	4
Chemistry (Agr. 101)	4
Physiology (Vet. 101)	2
Pharmaceutical Chem. (Agr. 406)	3
Chemical Lab'y (Agr. 110a)	6
Military Drill (Ac. 600)	3
xSubstitute Pharmaceutical Chemistry (Agr. 406) latter half term.	

SECOND YEAR.

First Term.

Pharmacy (Agr. 403a)	3
Physics (Ac. 504)	3
Botany (Agr. 301)	6
Pharmacy Lab'y (Agr. 403b)	12
Chemical Lab'y (Agr. 110b)	6
Military Drill (Ac. 600)	3

Second Term.

Pharmacy (Agr. 403a)	3
Physics (Ac. 504)	3
Pharmacognosy (Agr. 402)	4
Botany (Agr. 301)	6
Alkaloidal Assay (Agr. 403c)	9
Chemical Lab'y (Agr. 110b)	6
Military Drill (Ac. 600)	3

Third Term.

Pharmacy (Agr. 403a)	3
Physics (Ac. 504)	3
Pharmacognosy (Agr. 402)	4
Botany (Agr. 301)	6
Prescription Lab'y (Agr. 403d)	4
Pharmaceutical Testing and Drug Analysis	6
Toxicology (Agr. 110c)	7
Military Drill (Ac. 600)	3

THIRD YEAR.

First Term.

Advanced Pharmacognosy (Agr. 404)	4
Organic Chemistry (Agr. 103a)	2
German (Ac. 305a)	4
Bacteriology (Vet. 108)	6
Zoology (Agr. 701)	5
Chemical Lab'y (Agr. 110c)	6
Food and Drug Analysis (Agr. 408j)	12
Military Tactics (Ac. 601)	1

Second Term.

xxAdvanced Pharmacognosy (Agr. 404)	4
Organic Chemistry (Agr. 103a)	2
United States Pharmacopœia (Agr. 407)	3

xBacteriology (Vet. 108) -----	6
German (Ac. 305b) -----	4
Zoology (Agr. 701) -----	5
Chemical Lab'y (Agr. 110c) --	6
Organic Chemical Lab'y (Agr. 408g) -----	8
Military Tactics (Ac. 601) ----	1

Third Term.

Prescriptions (Agr. 405) -----	3
German (Ac. 305c) -----	4
Organic Chemistry (Agr. 103a) 2	
United States Pharmacopoeia (Agr. 407) -----	3
Pharmacology (Vet. 120) -----	3
Chemical Lab'y (Agr. 110c) --	6
Organic Chemical Lab'y (Agr. 408g) -----	12

Military Tactics (Ac. 602) ----	1
xxSubstitute Prescriptions (Agr. 405) latter half second term.	

xSubstitute Pharmacology (Vet. 120) latter half second term.

PHARMACY

FRESHMAN CLASS.

First Term.

English (102a) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) -----	3
Mathematics (Ac. 401) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 351) ----	6
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 209) -----	4
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 352) ----	6
Military Drill (Ac. 600) -----	3

Third Term.

English (102b) -----	3
History (Ac. 201) -----	2
Latin (Ac. 205) -----	3
Mathematics (Ac. 402) -----	5
Chemistry (Agr. 101) -----	4
Drawing (Eng. 601) -----	5
Mechanic Arts (Eng. 353) ----	6
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
xMathematics (Ac. 403) -----	5

Botany (Agr. 301) -----	6
English (Ac. 103a) -----	3
Physiology (Vet. 101) -----	2
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3

Second Term.

Physics (Ac. 504) -----	3
History (Ac. 202) -----	2
English (Ac. 103c) -----	3
xMathematics (Ac. 403) -----	5
Botany (Agr. 301) -----	6
Physiology (Vet. 101) -----	2
Chemical Lab'y (Ac. 110a) --	6
Military Drill (Ac. 600) -----	3

Third Term.

Physics (Ac. 504) -----	3
English (Ac. 103c) -----	3
xMathematics (Ac. 404) -----	5
Botany (Agr. 301) -----	6
Physiology (Vet. 101) -----	2
Chemical Lab'y (Agr. 110a) --	6
Military Drill (Ac. 600) -----	3
xWith approval of faculty other work may be substituted.	

JUNIOR CLASS.

First Term.

German (Ac. 305a) -----	4
English (Ac. 107) -----	3
Pharmacy (Agr. 401a) -----	3
Pharmaceutical Lab'y (Agr. 401b) -----	8
Chemical Lab'y (Agr. 110b) --	6
Military Tactics (Ac. 601) ----	1
Military Drill (Ac. 600) -----	3

Second Term.

German (Ac. 305b) -----	3
English (Ac. 107) -----	3
xPharmacy (Agr. 401a) -----	3
Pharmaceutical Laboratory (Agr. 401b) -----	8
Pharmacognosy (Agr. 402) -----	4
Chemical Lab'y (Agr. 110b) --	6
Military Tactics (Ac. 601) ----	1
Military Drill (Ac. 600) -----	3

Third Term.

German (Ac. 305c) -----	4
English (Ac. 107) -----	3
Phar. Chem. (Agr. 406) -----	3
Pharmacognosy (Agr. 402) ----	4
Chemical Lab'y (Agr. 110b) --	6
Military Tactics (Ac. 602) ----	1
Military Drill (Ac. 600) -----	3
xSubstitute Phar Chem. (Agr. 406) latter half term.	

SENIOR CLASS.

First Term.

Bacteriology and Bact. Lab'y (Vet. 108)	6
Organic Chem. (Agr. 103a)	2
Pharmacy (Agr. 403a)	3
Adv. Pharmacog. (Agr. 404)	3
Military Science (Ac. 603)	1
Chemical Lab'y (Agr. 110c)	6
Pharmaceutical Laboratory (Agr. 403b)	12

Second Term.

Bacteriology and Bact. Lab'y (Vet. 108)	6
Adv. Pharmacog. (Agr. 404)	4
United States Phar. (Agr. 407)	3
xPharmacology (Vet. 120)	3
Organic Chem. (Agr. 103a)	2
Pharmacy (Agr. 403a)	3
Military Science (Ac. 604)	1
Chemical Lab'y (Agr. 110c)	6
Alkaloidal Assay (Agr. 403c)	9

Third Term.

United States Phar. (Agr. 407)	3
Pharmacology (Vet. 120)	3
Organic Chem. (Agr. 103a)	2
Pharmacy (Agr. 403a)	3
Prescriptions (Agr. 405)	3
Military Science (Ac. 605)	1
Toxicology (Agr. 110e)	6
Urinalysis (Vet. 117)	3
Prescription Laboratory (Agr. 403d)	6
Pharmaceutical Testing and Drug Analysis (Agr. 403e)	6
xSubstitute for Bacteriology in latter half term.	

PRE-MEDICAL COURSE

FIRST YEAR.

First Term.

xEnglish (Ac. 102a, c)	5
Inorganic Chemistry (Agr. 101)	4
Qual. Chemical Lab'y (Agr. 110a)	6
Trigonometry (Ac. 401)	5
Botany (Agr. 301)	6
Physiology (Vet. 101)	2
Military Drill (Ac. 600)	3

Second Term.

xEnglish (Ac. 102a, b)	5
Inorganic Chemistry (Agr. 101)	4
Qual. Chemical Laboratory (Agr. 110a)	6
College Algebra (Ac. 402)	5
Botany (Agr. 301)	6
Physiology (Vet. 101)	2
Military Drill (Ac. 600)	3

Third Term.

xEnglish (Ac. 102a, b)	5
Inorganic Chemistry (Agr. 101)	4
Qual. Chem. Lab'y (Agr. 110a)	6
College Algebra (Ac. 402)	5
Botany (Agr. 301)	6
Physiology (Vet. 101)	2
Military Drill (Ac. 600)	3
xLatin, French or German may be substituted.	

SECOND YEAR.

First Term.

French or German	4
Organic Chemistry (Agr. 103a)	2
Quant. Chem. Lab. (Agr. 110b)	6
Physics (Ac. 504)	3
Physical Laboratory (Ac. 502)	2
Zoology (Agr. 701)	5
Histology (Vet. 108)	5
Military Drill (Ac. 600)	3

Second Term.

French or German	3
Organic Chem. (Agr. 103a)	2
Quant. Chem. Lab. (Agr. 110b)	6
Physics (Ac. 504)	3
Physical Laboratory (Ac. 502)	2
Zoology (Agr. 701)	5
Histology (Vet. 108)	5
Military Drill (Ac. 600)	3

Third Term.

French or German	4
Organic Chemistry (Agr. 103a)	2
Quant. Chem. Lab. (Agr. 110b)	6
Physics (Ac. 504)	3
Physical Lab'y (Ac. 502)	2
Toxicology (Agr. 110e)	7
Histology (Vet. 108)	5
Physiological Chem. (Vet. 119)	4
Military Drill (Ac. 600)	3

SCHOOL OF AGRICULTURAL EDUCATION

FRESHMAN CLASS.

First Term.

English (Ac. 102a, c) -----	5
History (Ac. 201) -----	2
Chemistry (Agr. 101) -----	4
Agr. Mathematics (Ed. 24) -----	3
Farm Carpentry (Ed. 25) -----	6
Agr. Drawing (Ed. 28) -----	6
Poultry Husbandry (Ed. 30) -----	4
Military Drill (Ac. 600) -----	3

Second Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Chemistry (Agr. 101) -----	4
Agr. Mathematics (Ed. 24) -----	3
Farm Blacksmithing (Ed. 26) -----	6
Agr. Surveying (Ed. 29) -----	5
Poultry Husbandry (Ed. 31) -----	4
Military Drill (Ac. 600) -----	3

Third Term.

English (Ac. 102a, b) -----	5
History (Ac. 201) -----	2
Chemistry (Agr. 101) -----	4
Agr. Mathematics (Ed. 24) -----	3
Farm Machinery (Ed. 27) -----	6
Agr. Surveying (Ed. 29) -----	5
Poultry Husbandry (Ed. 32) -----	4
Military Drill (Ac. 600) -----	3

SOPHOMORE CLASS.

First Term.

Agr. English (Ed. 36, 37) -----	3
History (Ac. 202) -----	2
Corn (Agr. 202) -----	4
Home Projects and School Gardens (Ed. 33) -----	3
Zoology (Agr. 701) -----	6
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Organic Chemistry (Agr. 103b) -----	3
Animal Husbandry (Agr. 802) -----	2
Military Drill (Ac. 600) -----	3

Second Term.

Agr. English (Ed. 36, 37) -----	3
History (Ac. 202) -----	2
Home Projects and School Gardens (Ed. 33) -----	3
Zoology (Agr. 701) -----	6
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Organic Chemistry (Agr. 103b) -----	3
Animal Husbandry (Agr. 803) -----	4
Farm Accounts (Agr. 203) -----	2
Military Drill (Ac. 600) -----	3

Third Term.

Agr. English (Ed. 36, 37) -----	3
Home Projects and School Gardens (Ed. 33) -----	3
Botany (Agr. 301) -----	6
Physics (Ac. 504) -----	3
Agr. Chemistry (Agr. 105) -----	4
Small Grains (Agr. 203) -----	4
Horticulture (Agr. 601) -----	6
Military Drill (Ac. 600) -----	3

JUNIOR CLASS.

First Term.

Vocational Psychology (Ed. 2) -----	2
History of Agr. Education (Ed. 8) -----	2
Rural Social Conditions (Ed. 34) -----	3
Dairying (Agr. 804) -----	4
Veterinary Science (Vet. 102) -----	5
Agr. Bacteriology (Agr. 303) -----	6
Landscape Gardening (Agr. 602) -----	2
Drainage and Terracing (Agr. 520) -----	4
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	1

Second Term.

Principles of Education (Ed. 3) -----	2
History of Agr. Education (Ed. 8) -----	2
Principles of Rural Economics (Ed. 35) -----	3
Swine Judging (Agr. 805) -----	4
Veterinary Science (Vet. 102) -----	5
Plant Physiology (Agr. 304) -----	6
Vegetable Gardening (Agr. 603) -----	4
Orchard Technique (Agr. 604) -----	2
Agr. Geology (Eng. 434) -----	4
Military Tactics (Ac. 601) -----	1
Military Drill (Ac. 600) -----	3

Third Term.

Principles of Education (Ed. 3) -----	2
History of Agr. Education (Ed. 8) -----	3
Sheep Judging (Agr. 806) -----	2
Veterinary Science (Vet. 102) -----	5
Plant Physiology (Agr. 304) -----	6
Vegetable Gardening (Agr. 603) -----	4
Forage Plants (Agr. 205) -----	4
Military Tactics (Ac. 602) -----	1
Military Drill (Ac. 600) -----	3

SENIOR CLASS.

Group A, Agronomy.

Group B, Horticulture.

Group C, Animal Husbandry.

Electives: Senior candidates for the degree of Bachelor of Science in Agricultural Education shall elect a sufficient number of courses in Education and in the College of Agriculture to make, with the required courses listed below, a total of not fewer than twenty-one session-hours. All electives shall be made with the advice and approval of the Director of the School of Agricultural Education and the Professors concerned. Electives shall be made with the view of developing particular mastery in not less than two nor more than three subjects.

Thesis: All candidates for the degree, shall, in addition to completing the prescribed courses and electives, write a thesis on some subject in the field of his major interests. This thesis must show original investigation and a comprehensive mastery of the subject chosen.

GROUP A, AGRONOMY.

First Term.

Teaching High School Agriculture (Ed. 7)	3
Agricultural Extension Teaching (Ed. 10)	2
Agricultural Conference (Ed. 39)	
Agricultural Journalism (Ed. 38)	1
Soils and Soils Lab'y (Agr. 211)	5
Cotton (Agr. 206)	4
Entomology (Agr. 702)	5
Military Science (Ac. 603)	1

Second Term.

Teaching High School Agriculture (Ed. 7)	3
*Practice in Agricultural Teaching (Ed. 11)	
Agricultural Conference (Ed. 39)	
The High School Pupil (Ed. 14)	2
Agricultural Journalism (Ed. 38)	1

Cotton Classing (Agr. 207)	2
Soils and Soils Lab'y (Agr. 211)	5
Farm Engines (Agr. 521)	2
Farm Machinery (Agr. 522)	2
Forestry (Agr. 608)	5
Military Science (Ac. 604)	1

Third Term.

Teaching High School Agriculture (Ed. 7)	3
Agricultural Conference (Ed. 39)	
Agricultural Journalism (Ed. 38)	1
Farm Management (Agr. 208)	4
Soils and Soils Lab'y (Agr. 211)	5
Bees and Bee Keeping (Agr. 703)	5
Military Science (Ac. 605)	1

*Or in third term.

GROUP B, HORTICULTURE.

First Term.

Teaching High School Agriculture (Ed. 7)	3
Agricultural Extension Teaching (Ed. 10)	2
Agricultural Conference (Ed. 39)	
Agricultural Journalism (Ed. 38)	1
Soils and Soils Lab'y (Agr. 211)	5
Entomology (Agr. 702)	5
Fruit Growing (Agr. 605)	5
Canning (Agr. 606)	3
Plant Pathology (Agr. 305)	6
Military Science (Ac. 603)	1

Second Term.

Teaching High School Agriculture (Ed. 7)	3
*Practice in Agricultural Teaching (Ed. 11)	
Agricultural Conference (Ed. 39)	
The High School Pupil (Ed. 14)	2
Agricultural Journalism (Ed. 38)	1
Soils and Soils Lab'y (Agr. 211)	5
Fruit Growing (Agr. 605)	5
Plant Pathology (Agr. 305)	6
Forestry (Agr. 608)	5
Military Science (Ac. 604)	1

Third Term.

Teaching High School Agriculture (Ed. 7)	3
Agricultural Conference (Ed. 39)	

Agricultural Journalism (Ed. 38) -----	1
Soils and Soils Lab'y (Agr. 211)5	
Plant Breeding (Agr. 609) ----	5
Fruit Growing (Agr. 605) ----	5
Bees and Bee Keeping (Agr. 703) -----	5
Military Science (Ac. 605) ----	1
*Or in third term.	

GROUP C, ANIMAL
HUSBANDRY

First Term.

Teaching High School Agri- culture (Ed. 7) -----	3
Agricultural Extension Teach- ing (Ed. 10) -----	2
Agricultural Conference (Ed. 39) -----	
Agricultural Journalism (Ed. 38) -----	1
Soils and Soils Lab'y (Agr. 211)5	
Animal Breeding (Agr. 807) ----	2
Advanced Feeding (Agr. 808) -3	
Live Stock Management (Agr. 812) -----	3
Military Science (Ac. 603) ----	1

Second Term.

Teaching High School Agri- culture (Ed. 7) -----	3
*Practice in Agricultural Teaching (Ed. 11) -----	
Agricultural Conference (Ed. 39) -----	
The High School Pupil (Ed. 14)2	
Agricultural Journalism (Ed. 38) -----	1
Soils and Soils Lab'y (Agr. 211)5	
Advanced Feeding (Agr. 808) -3	
Meats (Agr. 809) -----	2
Judging Horses and Mules (Agr. 811) -----	2
Live Stock Management (Agr. 812) -----	3
Herd Book Study (Agr. 813) --	2
Military Science (Ac. 604) ----	1

Third Term.

Teaching High School Agri- culture (Ed. 7) -----	3
Agricultural Conference (Ed. 39) -----	
Agricultural Journalism (Ed. 38) -----	1
Soils and Soils Lab'y (Agr. 211)5	
Advanced Feeding (Agr. 808) -3	
Live Stock Management (Agr. 812) -----	3
Military Science (Ac. 605) ----	1
*Or in third term.	

COLLEGE OF VETERINARY MEDICINE AND SURGERY.

FRESHMAN CLASS.

First Term.

General Chem. (Agr. 101)	4
Physiology (Vet. 101)	2
English (Ac. 102a)	3
Anatomy and Anat. Lab'y (Vet. 107)	10
Histology (Vet. 108)	5
Stock Judging (Vet. 109)	2
Chemical Lab'y (Agr. 110a)	6
Vet. Science (Vet. 102)	2
Clinics (Vet. 112)	3
Military Drill (Ac. 600)	3

Second Term.

General Chem. (Agr. 101)	4
Physiology (Vet. 101)	2
English (Ac. 102b)	3
Anatomy and Anat. Lab'y (Vet. 107)	10
Histology (Vet. 108)	5
Stock Judging (110)	4
Chemical Lab'y (Agr. 110a)	6
Vet. Medicine (Vet. 106)	3
Clinics (Vet. 112)	3
Military Drill (Ac. 600)	3

Third Term.

General Chem. (Agr. 101)	4
Physiology (Vet. 101)	2
English (Ac. 102b)	3
Stock Judging (111)	2
Anatomy and Anat. Lab'y (Vet. 107)	10
Histology (Vet. 108)	5
Chemical Lab'y (Agr. 110a)	6
Vet. Medicine (Vet. 106)	3
Clinics (Vet. 112)	3
Military Drill (Ac. 600)	3

SOPHOMORE CLASS.

First Term.

Embryology (Vet. 113)	3
Organic Chem. (Agr. 103b)	3
Anatomy (Vet. 115)	10
Vet. Medicine (Vet. 116)	3
Clinics (Vet. 117)	6
Bacteriology (Vet. 118)	8
Military Drill (Ac. 600)	3

Second Term.

Organic Chem. (Agr. 103b)	3
Anatomy (Vet. 115)	8
Vet. Medicine (Vet. 116)	3
Pharmacy (120)	10
Bacteriology (Vet. 118)	6
Clinics (Vet. 117)	8
Military Drill (Ac. 600)	3

Third Term.

Physiological Chem. (119)	4
Vet. Medicine (Vet. 116)	3
Anatomy (Vet. 115)	8

Pharmacy (120)	10
Bacteriology (Vet. 118)	6
Botany (Agr. 302)	6
Clinics (Vet. 117)	8
Military Drill (Ac. 600)	3

JUNIOR CLASS.

First Term.

Surgery (Vet. 122)	4
Obstetrics (Vet. 123)	2
Anatomy (Vet. 124)	8
Vet. Medicine (Vet. 126)	3
Botany (Agr. 307)	5
Vet. Physiology (Vet. 127)	3
Clinics (Vet. 128)	10

Second Term.

Surgery (Vet. 122)	4
Obstetrics (Vet. 123)	2
Anatomy (Vet. 124)	8
Vet. Medicine (Vet. 126)	4
Vet. Physiology (Vet. 127)	4
Infectious Diseases (Vet. 129)	3
Clinics (Vet. 128)	10

Third Term.

Surgery (Vet. 122)	4
Obstetrics (Vet. 123)	2
Vet. Medicine (Vet. 126)	4
Vet. Physiology (Vet. 127)	3
Infectious Diseases (Vet. 129)	3
Anatomy (Vet. 124)	8
Clinics (Vet. 128)	10

SENIOR CLASS.

First Term.

Therapeutics (Vet. 131)	5
Principles of Breeding (Agr. 808)	2
Surgery (Vet. 135)	2
Meat Inspection (Vet. 138)	3
Pathology (Vet. 137)	7
Clinics (Vet. 136)	8
Thesis (Vet. 143)	4

Second Term.

Therapeutics (Vet. 131)	5
Dairying (Agr. 814)	4
Meat Inspection (Vet. 138)	3
Parasites (Vet. 140)	3
Clinics (Vet. 135)	10
Pathology (Vet. 137)	8
Thesis (Vet. 143)	4

Third Term.

Toxicology (Agr. 110e)	7
Urinalysis (Vet. 117)	3
Milk Inspection (Vet. 139)	5
Surgical Exercises (Vet. 141)	3
Parasites (Vet. 140)	3
Feeds and Feeding (134)	3
Clinics (Vet. 136)	10
Thesis (Vet. 143)	4

DESCRIPTION OF COURSES

ACADEMIC DEPARTMENTS

PSYCHOLOGY AND ECONOMICS

PROFESSOR THACH.

PROFESSOR RUTLAND.

1. Courses in psychology will be given in the department of education.

2. Economics: The object of this course is to give the student a general view of economics. It includes a study of wealth, value, price, competition, monopolization, production, and distribution; the evolution of industry, and the leading economic questions of today. Collateral reading, oral reports, and occasional written papers are required. *Two hours, second and third terms. M. W. 11-12.*

ENGLISH

PROFESSOR RUTLAND.

ASSISTANT PROFESSOR TAYLOR.

ASSISTANT MARTIN.

The mastery of one's native language is a pre-requisite to high attainment in any profession. In a technological institute, where only brief courses in foreign language can be pursued by most of the students, this mastery of the native speech becomes, if possible, even more essential to future success than in the classical colleges. This consideration alone would justify courses in English in technological institutions, but when we add to this the great cultural value of the study of language and literature, the wisdom of compulsory courses becomes obvious. The courses in English comprise the study of the theory of composition together with much practice in its application, both in writing and in speaking, a survey of the history of American and English literature, and an intensive study of the greatest periods and writers in English literature.

Requirements in English for admission are set forth on page 26. No student will be classed as regular in any course until he has met these requirements.

The requirements as to thesis and as to proficiency in English for certificates and diplomas are set forth on page 34.

The following courses are offered:

FRESHMAN CLASS.

102. (a) Composition for freshmen. The principles of exposition, narration and description are studied, but special emphasis is given to the different types of exposition. Weekly themes and frequent exercises are required. When practicable, the instructors hold fortnightly conferences with students in order to correct, assist and stimulate them. Textbook to be announced. *Three hours, first term; two hours, second and third terms. Daily 10-11.*

(b) American literature for freshmen. A survey of the history of American literature together with the study of selected masterpieces. The recitations will be devoted chiefly to the discussion of the literature assigned for study, but the students will be required to master a concise history of the subject and to keep notes on both the history and the selections. Text-books to be announced. *Three hours, second and third terms. M. W. F. 10-11.*

(c) Types of literature. This course is an appreciative study of some of the chief literary types—the essay, the drama, lyric and narrative verse, and the novel. Illustrative readings will be selected for the most part from American literature, but not entirely. *Two hours, first term. T. Th. 10-11.*

(d) Public speaking. This course is a study of the principles of public speaking. Attention is given to voice building bodily expression, and oral interpretation of selected speeches. Those taking the course during first term will substitute it for (c), those taking it in the second or third term will substitute it for (a). Text-book to be announced. *Two hours, half term.*

SOPHOMORE CLASS.

103. (a) Argumentation for sophomores. This course consists of the study of the essentials of argumentation and requires extensive practice in gathering material, note-making, brief-making, analysis and criticism of evidence, and practical debating. Weekly themes in argumentative form and one lengthy argument at the end of the course are required. Text-book to be announced. *Three hours, first term. M. W. F. 9-10.*

(b) Debating for sophomores. All sophomores are required to meet at least once fortnightly at some other hour than the regular recitation period for drill in parliamentary law and for practice in actual debating.

(c) English literature for sophomores. This course covers the whole range of English literature from Anglo-Saxon times to our own, and consists of the interpretive and critical study of selected poetry and prose. The aim is to give the student

not only a definite conception of the periods of literature and of the forces in life that found expression in literature, but also an appreciative understanding of the greater writers and productions. The students are required to keep full notes on the lectures as well as on the class study of selections. Text-books to be announced. *Three hours, second and third terms. M. W. F. 9-10.*

(d) Public speaking. This course may be chosen by sophomores instead of the actual debating required in (b). It is a study of the ends of speech making and the means of securing effectiveness and comprises practical exercises in collecting and organizing material in addition to the study of style and structure of selected speeches and readings. Text-book to be announced.

JUNIOR CLASS.

107. In the junior and senior years students pursuing the general course may form a separate section from the rest of the class. This section is required to do a greater amount of reading and written work than the technical students. Juniors may elect one of the following courses, but the department reserves the right to omit a course in case only a very small number elect it.

(a) Nineteenth century literature. The time will be about equally divided between Wordsworth and his contemporaries and the writers of the Victorian period. This course will involve wide reading, discussions of the technique of the writers, their art, growth of mind, general interpretation of life, and their relation to their own time and discussions of the various movements in science, politics, philosophy, and art in their relation to the literature of the period. The work is carried on partly by lectures and partly by class study of representative masterpieces. Students will be required to take notes on both lectures and class discussions, and to write weekly reports or themes. Text-book will be announced. *Three hours, entire session. M. T. Th. 12-1.*

(b) The essay and the novel. The larger part of the first term will be given to the study of the origin and development of the English Essay. Selected essays representing the seventeenth and eighteenth centuries will be read, and much time will be devoted to the essay of the nineteenth century. The rest of the year will be devoted to the history of the novel. Representative novels from the eighteenth century to the present time are studied; and special attention is given to technic, plot and character analysis, relation to other forms of literature, the writer's conception of his art, and style.

Text-book to be announced. *Three hours, entire session. M. T. Th. 12-1.*

(c) Contemporary literature. This course includes a study of recent tendencies in the drama, novel, short story and essay. Magazines such as the Atlantic Monthly, the Nation or the Dial are used as points of departure, but most of the work will consist of extensive assigned readings out of class, together with class-room reports and discussions. Open also to seniors. *Three hours, entire session. M. T. Th. 12-1.*

SENIOR CLASS.

108. The following courses are offered for seniors:

(a) Shakespeare. The development of the English Drama before Shakespeare will be reviewed briefly through assigned reading and lectures and the life of Shakespeare will be included in the matter for final examination, but the class room instruction will be devoted chiefly to a careful study of the plays. During the first few weeks several plays of the different types and representative of the different periods of authorship are given brief treatment. Most of the time, however, is given to the close study of two plays, one comedy, and one tragedy. Text-books to be announced. *Two hours, first term. M. W. 11-12.*

108b. Advanced composition for engineering students. This course is open to both seniors and juniors. The work will consist of themes on technical subjects and quizzes based upon technical reading. Weekly themes of from 1000 to 1500 words are required. There will be individual conferences and class discussions of the papers submitted. The course includes training in condensing and expanding articles, and the making of reports. The second term is given to the production of a weekly technical magazine. The third term is given to the writing, in weekly chapters, of extended themes. The class will be limited to twenty students.

108c. Advanced composition for agricultural students. A parallel course to 107b.

110. Methods of teaching English. If a sufficient number of students apply to the head of the department, a course in methods of teaching English will be offered, the text-book and hours to be determined later.

GRADUATE STUDENTS.

The following courses have been given to graduate students:

(a) Shakespeare: Hamlet, Othello, Macbeth, Merchant of Venice, As You Like It, Henry IV, Richard III, King John.

(b) Dryden's Poetical Works: Arnold's Dramatic Poesy, Yonge's Essay on Satire, Saintsbury's Dryden, Pope's Poetical

Works, Pattison's Satire, Stephen's Pope, Gosse's From Shakespeare to Pope, and Eighteenth Century Literature.

(c) English literature of the eighteenth century: Addison, Pope, Gray, Goldsmith, Burns, Cowper and Burke.

(d) American literature: Longfellow, Lowell, Poe.

(e) The English Essay: Bacon, Addison, Steele, Swift, Johnson, Goldsmith, Macaulay, DeQuincey, Lamb, Carlyle.

(f) Milton's Poetical Works: Life, Pattison, Brooke.

(g) Elizabethan, Jacobean, and Caroline literature: Greene, Johnson, Marlowe, Webster, Beaumont, and Fletcher, Brown, Herrick, Bunyan and others.

(h) English literature, 1832-1894.

(i) Chaucer.

(j) English prose fiction.

For the year 1918-19, one of the following courses may be elected by the graduate class:

Anglo-Saxon: A study of the grammar and phonology of Anglo-Saxon, together with the reading of select prose and verse. The class will probably read a portion of Beowulf.

Chaucer: A study of the life and times of Chaucer, together with the readings and critical study of a large portion of his collected writings.

Prose fiction: A study of the development of English fiction, with special emphasis upon the modern novel.

Shakespeare: A critical study of the dramatist's art.

HISTORY AND LATIN.

PROFESSOR PETRIE.

INSTRUCTOR REYNOLDS.

ASSISTANT WARD.

ASSISTANT BALCH.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that history is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. The students are taught to investigate the growth of ideas and institutions, the rise and progress of great historical movements, and the reciprocal influences of men and circumstances. Frequent use is made of diagrams, photographs, charts and maps, with which the department is well equipped. Instruction is given by text-books, lectures and class discussion, but a constant effort is made to stimulate to wider reading and research in the library. The following courses are offered:

FRESHMAN CLASS.

201. Industrial and constitutional history of the United States: The course consists of lectures and text-book work, and is somewhat advanced. All students who take it must have previously completed some high school text-book on the history of the United States. Text-books: Hart's Formation of the Union; Wilson's Division and Reunion. *Two hours, entire session. T. Th. 9-10.*

SOPHOMORE CLASS.

202. History of Modern Europe: Required of all members of the sophomore class. Some previous knowledge of the subject is desirable, but is not necessary. Text-book: Hazen's Europe Since 1815. *Two hours, first and second terms. T. Th. 10-11.*

203. Civics: This is an advanced course in the nature of our government and its practical working. Text-book: Beard's American Government and Politics. *Three hours, entire session.*

204. A brief course in recent⁴ history: Not required of any students, but those who expect to take the general course may take this work. Text-book: Hazen's Europe Since 1815, and current periodicals. *Two hours, third term. T. Th. 10-11.*

SENIOR CLASS.

205. English constitutional history: A course for one year for members of the senior class. Text-book: Ransome's The Growth of the English Constitution.

JUNIOR AND SENIOR CLASSES.

206. Historical laboratory: An opportunity for advanced work in United States history, for those students of the general course who elect it as laboratory work, and for any others who are properly qualified.

The chief object kept in view is training in historical research and in the formation of independent but careful opinions based on the original sources of information, as well as on the standard authorities. Emphasis is laid on the importance of securing proper material for investigation, and every incentive is given to the collection and use of new documents, papers, and letters illustrative of Southern, and especially of Alabama history. The method of work is as follows: Informal lectures are given on important and suggestive points as: The cause of the Revolution; the Constitutional Convention; the War of 1812; the Missouri Compromise; the Monroe Doctrine; Texas and Mexico; the Compromise of 1850; the Kansas Struggle; the Dred Scott Decision; Secession. After each lecture a general discussion follows, and the topics connected with it are assigned to the students with an outline of the points to be

investigated. The final results are collected by each student according to his own judgment in his note-book, which is then passed in to the professor for correction and suggestion. Text-book: McDonald's Select Statutes. *Six hours, entire session. T. Th. 2-4, and reading two hours.*

International Law: Brief courses are offered for all juniors and seniors. See Military Science and Tactics. *One hour a week for five weeks. F. 12-1.*

Military History: A course of five lectures discussing the strategy of the wars in which the United States have been engaged. This is for all juniors. See Military Science and Tactics. *F. 11-12.*

GRADUATE COURSE.

207. Graduate students are expected to take part in the junior and senior discussions, and will also meet with the professor for conference about their work. Each year some special field is taken for investigation and discussion. Those who take history as their major study are expected to devote a large part of their time to research upon some topic upon which they can consult the original sources of information.

208. Teachers' course: Conference every other week with those students who expect to teach history.

LATIN.

The objects kept in view in this department are: An accurate knowledge of the forms and syntax; a familiarity with Latin words, their etymology and their English derivatives, an appreciation of Latin literature and an intelligent conception of Roman history and civilization, both in themselves and in their effect in the modern world.

A systematic course in instruction is given in the forms and syntax. These are taught both deductively from a grammar and inductively from the text read. Translation is constantly practiced, sometimes at sight, sometimes after being assigned for preparation. English passages based on a familiar author or illustrative of special constructions are put in Latin, both orally and in writing. Great emphasis is laid on the etymology of the words in the text read.

In connection with every author studied in class, a course of reading in English is prescribed descriptive of his life, work and times. The historical setting and the literary value of his writings are carefully discussed, and frequent comparisons are made with modern authors.

In the freshman and sophomore classes, the study of the language is the chief point. In the higher classes a broader view is taken. The junior class makes a special study of

Roman history and Roman historians. The senior class studies Roman poetry and Roman life.

The following courses are offered with the text-books named:

209. Freshman class: Exercises, Cicero, Sallust, or equivalent. Allen and Greenough's Latin Grammar. *Three hours, first term; four hours, second and third terms. M. T. Th. F. 11-12.*

210. Sophomore class: Livy, Allen and Greenough's Grammar, Bennett's Latin Composition. *Five hours, entire year. Daily 8-9.*

211. Junior class. Livy, Tacitus, grammar, Roman History, exercises. Allen and Greenough's Grammar, Botsford's History of Rome. *Three hours, entire year. M. W. F. 9-10.*

212. Senior Class: Horace, Plautus, Latin literature, grammar. Allen and Greenough's Grammar. *Three hours, entire year. M. W. F. 10-11.*

213. Pedagogical course: During the spring term a pedagogical course is given in Latin. It is designed chiefly, but not exclusively, for members of the senior class. It includes a discussion of the methods of teaching forms and syntax, as well as concrete illustrations of the way to overcome the difficulties in Cæsar and Virgil.

MODERN LANGUAGES.

PROFESSOR WIATT.

ASSISTANT ELIZONDO.

The chief aim in this department is to give the student a thorough and accurate knowledge of the elementary principles of the subjects taught, and to enable him to read with facility the ordinary French and German at sight. To train the ear, acquire a correct pronunciation and some facility in speaking all recitations are supplemented, as far as practicable, by oral exercises in the languages themselves.

Opportunity for the study of Spanish is given students who elect that language.

FRENCH.

JUNIOR CLASS.

(301). (a) A course covering the essentials of grammar and pronunciation to enable the student to begin the reading of simple French prose. This course continues through the first term, three hours a week being given to the study of grammar and one hour to pronunciation and conversation. *Four hours, first term. T. Th. 10-11., F. 3-5.*

(b) The second term includes a course of reading in simple prose (2 hours a week), and the continuation of grammar with

translations of English into French (1 hour a week). *Three hours, second term. T. Th. 10-11, F. 3-4.*

(c) During the third term the reading of more advanced selections in prose and poetry is begun (2 hours a week), grammar and composition (1 hour a week); and pronunciation and conversation (1 hour a week). *Four hours, third term. T. Th. 10-11, F. 3-5.*

SENIOR CLASS.

302. (a) A course in reading: Corneille and modern French plays (2 hours a week); laws of grammar and composition (1 hour a week); pronunciation and conversation (1 hour a week). *Four hours, first term. M. 10-11, T. Th. 9-10, F. 4-5.*

(b) The second term is given to the study of Racine, and the reading of modern French literature (2 hours a week), and to continued study of the structure and syntactical features of the languages in connection with translations into French. *Three hours, second term. M. 10-11, T. Th. 9-10.*

(c) The third term includes a study of Moliere (1 hour a week); the history of French literature (1 hour a week); more advanced work in grammar and composition (1 hour a week); and pronunciation and conversation (1 hour a week). *Four hours, third term. M. 10-11, T. Th. 9-10, F. 4-5.*

303. Teachers' course: During the spring term the work of the senior class will be so modified or supplemented, as to include a short pedagogical course for students who expect to teach French. This will consist chiefly of elementary work in grammar and syntax, and a study of the best methods of giving instruction in this subject. *Third term, senior year.*

GRADUATE STUDENTS.

304. Graduate course: Offered for students who wish to pursue the study of French beyond the scope to which a two-year course necessarily limits them. In addition to the authors studied in the lecture room, a wide and extensive reading of literature is prescribed.

TEXT-BOOKS.

First year: Frazer and Squair's Shorter French Course; Koren and Chapman's French Reader.

Second year: Corneille, Racine, Moliere, selected modern French plays, Duval's Histoire de la Literature Francaise; Frazer and Squair's French Grammar, French Composition.

GERMAN.

The following regular courses are given:

JUNIOR CLASS.

305. (a) A course embracing the fundamental principles of grammar and the essentials of pronunciation leading to the in-

telligent reading and translation of simple German texts (3 hours a week), and exercises in pronunciation and conversation (1 hour a week). *Four hours, first term. T. Th. 8-9, W. 12-1, M. 4-5.*

(b) In the second term the reading of simple prose is begun (2 hours a week), and grammar and composition continued (1 hour a week). *Three hours, second term. T. Th. 8-9, W. 12-1.*

(c) Reading of more difficult selections of prose and poetry is begun and continued throughout the third term (2 hours a week). Grammar and composition continued (1 hour a week), and conversational exercises (1 hour a week). *Four hours, third term. T. Th. 8-9, W. 12-1, M. 4-5.*

SENIOR CLASS.

306. (a) A course of reading in modern German (2 hours a week); structure and syntax of the language with translations into German (1 hour a week); conversation (1 hour a week). *Four hours, first term. M. W. F. 8-9, M. 4-5.*

(b) Schiller (2 hours a week); History of German Literature and composition (1 hour a week). *Three hours, second term. M. W. F. 8-9.*

(c) German lyrics and ballads (2 hours a week). German literature (1 hour a week), composition and conversation (1 hour a week). *Four hours, third term. M. W. F. 8-9, M. 4-5.*

307. A course for students from the scientific schools, including readings of various scientific subjects, selected to meet the requirements of the class (2 hours a week), grammar and composition (1 hour a week), and conversation (1 hour a week). *Four hours, entire session. Schedule to be arranged.*

308. Teachers' course: During the third term in the senior class of German, the course will be so modified, or supplemented, as to include a short pedagogical course for those students who expect to become teachers of this language. This will consist chiefly of elementary work in grammar and syntax, and a study of the best methods of giving instruction in the subject.

GRADUATE STUDENTS.

309. Advanced course: For those students who wish to pursue the study of German beyond the scope to which a two-year course necessarily limits them. Here, in addition to the authors studied in the lecture room, a wide and extensive reading of authors and literature is prescribed.

TEXT-BOOKS.

First year: Wesselhoeft's German Grammar, Huss's German Reader.

Second year: Schiller, Lessing, selected modern German plays, German lyrics, Bernhardt's Deutsche Litteraturgeschichte, Harris's German Grammar, German Composition.

SPANISH.

310. A course in Spanish is also given, embracing the fundamentals of the language, consisting of a study of the grammar, readings of modern Spanish selections and exercises in conversation. *Three hours, entire session. T. W. F. 11-12.*

Texts: Ingraham-Edgren's Brief Spanish Grammar; Turrell's Spanish Reader.

MATHEMATICS

PROFESSOR CRENSHAW.

PROFESSOR MESSICK.

PROFESSOR SHI.

INSTRUCTOR PIMM.

INSTRUCTOR STOKES.

INSTRUCTOR DONAHUE.

The courses of instruction offered in this department are designed to give the student that mental discipline and training in logic which will enable him to think and reason logically; as well as a thorough knowledge of the principles and formulas of pure mathematics and their practical applications in the engineering and other scientific professions.

The courses offered in the different classes in this department are as follows:

FRESHMAN CLASS.

401. Plane Trigonometry. *Five hours, first term. Daily 8-9, 10-11, and 11-12.*

402. Advanced Algebra. *Five hours, second and third terms. Daily 8-9, 10-11, and 11-12.*

SOPHOMORE CLASS.

403. Analytic Geometry. *Five hours, first and second terms. Daily 12-1.*

404. Introductory course in Calculus. *Five hours, third term. Daily 12-1.*

JUNIOR CLASS.

405. Calculus. *Five hours, entire year. Daily 11-12.*

GRADUATE STUDENTS.

407. Differential Equations. *Two hours, entire year.*

408. Methods of teaching mathematics. The department offers a course designed for teachers of elementary mathematics, or for those who expect to make this their profession. The elementary branches of mathematics will be reviewed and methods of teaching briefly discussed, keeping constantly in view the co-ordination of the lower branches with the higher..

The course will include also a brief *resume* of the history of the elementary subjects, a critical examination of the extant text-books; and finally, an outline of a course of study in advanced mathematics to be pursued by the teacher.

409. Projective Geometry. This course which aims to present the elements of the subject, will be offered to seniors and graduate students in architecture and engineering, and to those properly equipped who wish to pursue the subject of mathematics. *Hours to be arranged, third term.*

TEXT-BOOKS.

Palmer and Leigh's Trigonometry; Fite's College Algebra; Fine and Thompson's Coordinate Geometry; Smith and Granville's Elementary Analysis; Granville's Calculus; Leib's Problems in the Calculus; Cohen's Differential Equations.

PHYSICS.

PROFESSOR DUNSTAN.

ASSISTANT HEYMAN.

ASSISTANT SIMMONS.

The complete course in physics extends over two years and it is designed to give as far as possible an adequate and correct idea of the method of physical sciences and to lay the foundation for subsequent advanced work if the student desires to pursue the work further or intends to engage in any of the great engineering professions of which physics forms so important a basis.

Two of the courses offered are given in the sophomore year, one being a lecture course and the other a course in laboratory work. The lectures are illustrated by lecture table experiments, and the students are required to work numerous problems and exercises.

SOPHOMORE CLASS.

504. A lecture course in general physics required of all students who are candidates for the degree of Bachelor of Science. For entrance upon this course the student should have had one year's work in elementary physics and a working knowledge of plane trigonometry. The subjects treated are varied from year to year, but they consist in the main of mechanics of rigid bodies, heat, light, sound, electricity, etc. Written exercises will be required each week. *Three hours, entire session. M. W. F. 10-11.*

502. This is a laboratory course which is required of all students in engineering. Non-engineering students may select it as an optional subject. The laboratory experiments are care-

fully selected and they comprise work in general mensuration with instruments of precision, heat, light, sound and electricity. The student is required to write a full report of each experiment as he completes it, and the form of compiling data and expressing methods and results is given great weight in determining average grades. The work in the laboratory will be arranged so as to co-ordinate as far as possible with the work treated in the lecture course. Entrance upon the laboratory course requires the student shall have had at least one year of elementary physics. *Two hours, entire session. M. W. F. 2-4.*

SENIOR CLASS.

505. This lecture course is more advanced than the one given to the sophomores and it presupposes a knowledge of the calculus, both differential and integral. The subjects treated are varied from year to year. They are treated thoroughly and rigorously, and the student is encouraged to learn to use the language of mathematics in expressing his ideas. Attention is paid to the history of the development of the various subjects treated. Written exercises are required each week. *Two hours, first and second terms. T. Th. 11-12.*

506. Astronomy. A brief course in descriptive astronomy. *Two hours, third term. T. Th. 11-12.*

GRADUATE STUDENTS.

508. Mechanics. A course in mechanics is offered in which the methods of vector analysis are applied to the derivations of various principles and in the solutions of various problems. The course presupposes a thorough working knowledge of analytical geometry and the calculus. *Two hours, entire session.*

MILITARY SCIENCE AND TACTICS

MAJOR EDWARD T. WINSTON, U. S. A., RET.

The military department is maintained under the Federal Law of July 2nd, 1862, and the Act of Congress, June 3rd, 1916.

Under the latter law a regimental unit of the Senior Division of the Reserve Officers' Training Corps is organized under the administration of the War Department and the supervision of the Commanding General, South-Eastern Department.

An officer of the Regular Army is detailed as Professor of Military Science and Tactics. He is assisted by three sergeants detailed from the army.

The Professor of Military Science and Tactics is, by the appointment of college authorities, the Commandant of Cadets.

Under the Act of June 3rd, 1916, the college is provided with arms and equipment, and a uniform is furnished by the

Government for issue, by the College, to each member of the Reserve Officers' Training Corps. The uniform remains the property of the Government, and is for the use of the student only while he remains a member of the Training Corps. Insignia of rank are purchased by the cadet, at a small cost.

The course of instruction is a graded course, covering four years. When any member of the Senior Division of the Reserve Officers' Training Corps has completed two academic years in that division, and has been selected for further training by the president of the institution and by its professor of military science and tactics, and has agreed in writing to continue in the Reserve Officers' Training Corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, and has agreed in writing to pursue the courses in camp training prescribed by the Secretary of War, he may be furnished, at the expense of the United States, with commutation of subsistence at such rate, not exceeding the cost of the garrison ration prescribed for the army, as may be fixed by the Secretary of War, during the remainder of his service in the Reserve Officers' Training Corps.

The course in camp training prescribed by the Secretary of War consists of two summer camps, not to exceed six weeks in any one year. Transportation to and from the camps and subsistence during such travel and while at the camp is furnished at the expense of the Government, as far as appropriations will permit.

No obligation to perform military service after graduation is incurred by the student.

The object of the military training in the Reserve Officers' Training Corps is to educate college men in the duties of a subaltern officer in the Army. After graduation he is as free as any other citizen.

The following uniform of standard cadet grey cloth has been prescribed for dress: coat and trousers as worn in the fatigue uniform at the United States Military Academy; cap, dark blue cloth with mohair braid band and brass cap ornament; shoes, tan leather. This uniform is purchased by the student.

The following uniform has been prescribed for summer wear, and to be worn at such times as may be ordered by the Commandant: trousers, grey dress; shirt, olive drab woolen cloth of approved shade and quality; cap, same as dress; shoes, same as dress; tie, black string tie of medium length; waist belt, woven web of olive drab color. The cost of shirt, tie and belt is about \$3.50.

The entire body of students is organized as a regiment of two battalions and a band. The officers are selected as far as practicable from among the seniors and juniors who are pursuing the Advanced Course of the Reserve Officers' Training Corps. Selection is based upon an examination for each grade from corporal to captain inclusive. Moral fitness, including demerits and standing in studies, will be considered.

A band composed of cadets furnishes appropriate music for parades and other ceremonies and on special occasions. Members of the Reserve Officers' Training Corps are authorized to serve in the band so long as their regular course of instruction is not interfered with.

On the graduation of each class the names of such students as have shown special aptitude for military service will be reported to the Adjutant General of the Army, and to the Adjutant General of their respective states.

On graduation from the military department a student may make application for appointment as an officer in the Officers' Reserve Corps and when he has been appointed in that Corps he may make application for temporary commission as an additional second lieutenant in the Regular Army for a period of six months with full allowances and with pay of \$100.00 per month. Both applications are made voluntarily. The graduates of the Reserve Officers' Training Corps are entitled to make application but there is no obligation to do so.

600. Basic course:

FRESHMAN CLASS.

1. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment.

(b) Theoretical. Weight 4.

Theory of target practice, individual and collective (use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene.

2. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry Drill Regulations); bayonet combat; intrenchments (584-595, Infantry Drill Regulations); first-aid instruction; range and gallery practice.

(b) Theoretical. Weight 4.

Lectures, general military policy as shown by military history of United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations, to include School of Company; camp sanitation for small commands.

SOPHOMORE CLASS.

3. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

The same as course 2 (a). Combat firing, is practicable, but collective firing should be attempted in indoor ranges by devices now in vogue at United States Disciplinary Barracks.

(b) Theoretical. Weight 4.

United States infantry Drill Regulations, to include School of Battalion and Combat (350-622); Small Arms Firing Regulations; lectures as in (b) course 2; map reading; camp sanitation and camping expedients.

4. Military art.

Three hours a week (counting 14 units).

(a) Practical. Weight 10.

The same as course 2 (a); signaling; semaphore and flag; first-aid. Work with sand table by constructing to scale entrenchments, field works, obstacles, bridges, etc. Comparison of ground forms (constructed to scale) with terrain as represented on map; range practice.

(b) Theoretical. Weight 4.

Lectures, military history (recent); service of information and security (illustrated by small tactical problems in patrolling, advance guards, rear

guards, flank guards, trench and mine warfare, orders, messages, and camping expedients); marches and camps (Field Service Regulations and Infantry Drill Regulations).

ADVANCED COURSE.

(Elective for those who have completed the basic course).

JUNIOR CLASS.

601-602 Advanced Course:—

5. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises laid down for the unit or units. Military sketching.

(b) Theoretical. Weight 11.

Minor tactics; field orders (studies in minor tactics, Unites States School of the Line); map maneuvers. Weight 8.

Company administration, general principles (papers and returns). Weight 1.

Military history. Weight 2. Professor Petrie.

6. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Same as (a) course 5. Military sketching.

(b) Theoretical. Weight 11.

Minor tactics(continued); map maneuvers.Weight 8.
Elements of international law. Weight 2. Professor Petrie.

Property accountability; method of obtaining supplies and equipment(Army Regulations).Weight 1.

SENIOR CLASS.

603-605. Advanced course:

7. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching.

(b) Theoretical. Weight 11.

Tactical problems, small forces, all arms combined;

map maneuvers; court-martial proceedings (Manual for Courts-martial).

International relations of America from discovery to present day; gradual growth of principles of international law embodied in American diplomacy, legislation, and treaties. Professor Petrie. Lectures: Psychology of war and kindred subjects. General principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed 5 lectures).

8. Military art.

Five hours a week (counting 24 units).

(a) Practical. Weight 13.

Same as course 7 (a).

(b) Theoretical. Weight 11.

Tactical problems (continued); map maneuvers.

Rifle in war.

Lectures on military history and policy.

COLLEGE OF ENGINEERING, MINES AND ARCHITECTURE

CIVIL ENGINEERING.

PROFESSOR MITCHAM.

ASSISTANT PROFESSOR STELZENMULLER

FRESHMAN CLASS.

102. Plane surveying and levelling: Instruction is given in the use, care, and adjustment of instruments; standardizing tapes; determination of true meridian and magnetic declination; U. S. Public Land Surveys; methods of retracing old lines; farm surveys by various methods; plotting and calculating areas; dividing lands; surveying and mapping existing roads and streets; laying out townsites and establishing permanent monuments for same; differential levelling; profile levelling; construction of profiles and establishing grades; cross-section levelling; calculation of volumes of excavation and embankment; topographic surveying; mapping; terracing; staking out and giving grades for sewers, ditches, and drains; staking out buildings, etc. *Lectures and recitations, three hours, field practice two hours, second and third terms. M. W. F. 8-9 and 11-12.*

SOPHOMORE CLASS.

103. Higher surveying: Required of civil engineering students. Instruction will cover hydrographic surveying; mining surveying; city surveying; geodetic surveying and projection of maps. *Lectures and recitations two hours, field practice two hours, third term. T. Th. 8-9.*

104. Railway surveying: Required of students pursuing courses in civil and mining engineering. Instruction will cover preliminary surveys; theory of simple, reversed, and compound curves; transition curves; railway grades; vertical curves; construction surveys; calculation of quantities involved in railway construction. *Three hours recitations and two hours practice, first term. M. W. F. 8-9.*

106. Railway surveying: A course involving additional study of the railroad spirals; problems in location; fixing grades with reference to economy in construction and operation; approximate estimates of quantities from profiles; cross-sectioning and calculating of excavation and embankment; calculation of overhaul; borrow pits; planning, and staking out

railway structures. *Two hours recitations and two hours field and office practice, second term. T. Th. 8-9.*

JUNIOR CLASS.

107. Roads and pavements: A course of lectures and recitations covering economic principles involved in road improvement; analysis of resistance to traction; location, grades, and drainage of new roads; relocation and improvement of existing roads; construction of earth, gravel, macadam, concrete, brick, and bituminous roads, with study of properties of the various materials used in road construction, the methods employed in testing them, and the best specifications for constructing roads with the several materials; street plans of cities and towns; width and grades of streets; curbs and gutters; construction of various kinds of street pavements; storm drainage systems for cities; and construction of sidewalks. *Five hours, second and third terms. M. T. W. Th. F. 9-10.*

108. Road materials laboratory: The study and testing of various materials used in the construction of roads and pavements. The purpose of the course is to give the student an opportunity of becoming familiar with the physical properties, relative merits, and methods of testing the various materials. *Four hours, second term. T. Th. 2-4.*

109. Road and street improvement: A practical field and office course in making surveys, plans, and estimates for road and street improvements. *Four hours, third term. T. Th. 2-4.*

111. Graphic Statics: A course of lectures and drafting room exercises covering fundamental principles of equilibrium; composition and resolution of forces; the equilibrium polygon; graphical determination of stresses in trusses and framed structures, bending moment and shear in beams; center of gravity of given sections; moment of inertia. *Lectures two hours, drafting four hours, third term. M. W. F. 2-4.*

112. Structural drafting: The purpose of this course is to acquaint the student with the details of structural steel work, to train him in the neat and accurate execution of drawings, and to teach him in a practical way to solve some of the simpler problems in structural mechanics. *Six hours, first and second terms. M. W. F. 2-4.*

SENIOR CLASS.

113. Theory of structures: The purpose of this course is to teach the fundamental principles underlying the design of bridges, roofs, and other framed structures of metal and timber. The discussions cover determination of outer and inner forces acting on the structure; concentrated live load systems; design of beams, plate girders, simple trusses, bridge trusses with

secondary web systems, lateral and portal bracing, transverse bents, viaduct towers, cantilever bridges, three-hinged arches. *Five hours, first term. M. T. W. Th. F. 10-11.*

114. Structural design: This is a drafting room course in the practice of bridge and structural design and is the complement of course 113. Complete designs are worked out for a number of structures. *Nine hours, first and third terms. M. W. F. 2-5.*

115. Railroad engineering: The discussions cover the inception, promotion, and organization of railroad projects, organization and construction; the duties of the engineer; alignment and grades; rails and rail fastenings; cross ties; ballast and roadbed; culverts; bridges, and minor structures; turn-outs, sidetracks and yards; terminals; elevation of outer rail; signalling; the locomotive and its work; the locomotive and grade problems; railroad expenditures; relation of operating expenses to number of trains; effect of rise and fall, distance, and curvature to train mile costs; railroad location, construction, and betterment surveys. *Three hours, first term. M. W. F. 12-1.*

116. Theoretical hydraulics: The discussions cover fluid pressures; equilibrium of floating bodies; fundamental principles of hydro-mechanics; methods of measuring the flow of water; Pitot tube; Venturi meter; orifices; tubes; sluices; weirs; nozzles; fire hose; flow in open channels, sewers, conduits, etc.; flow in pipes; dynamic action of flowing water; impulse wheels; turbines of various types; centrifugal pumps. *Five hours, second term. M. T. W. Th. F. 10-11.*

117. Practical hydraulics: This course is the complement of course 116, and its purpose is to bring the student into close touch with practical hydraulics. The work includes the determination of coefficients of orifices, tubes, and nozzles, determining loss of head in pipes and fire hose; measurement of water by weirs and meters; testing meters and pumps; gauging streams with current meter; visits of inspection to hydro-electric power plants under construction and in operation and reports on same. *Three hours, third term.*

118. Concrete and masonry construction: Discussions cover mathematical theories underlying the design of reinforced concrete beams, columns, slabs and arches; cements, limes and mortars; methods of mixing and placing plain and reinforced concrete; classification and properties of building stones; definition and construction of various classes of stone masonry; manufacture of brick; brick work; stone and brick arches; retaining walls; piers and abutments; shallow foundations; coffer dams; crib foundations; pile foundations; pneumatic

caissons; the freezing process; cylinder piers. *Three hours, second and third terms. M. W. F. 12-1.*

119. Sanitary engineering: The discussions cover the history of sanitary science; sanitary measures necessary for the prevention of zymotic diseases; the engineer's part in the campaign for the prevention of disease; the sources of water supply; its collection, purification, and distribution; sewerage, and sewerage design; sewage disposal; construction of sewers; pumping of sewage; sewage treatment plant; sewage farms; collection and disposal of garbage and rubbish; street cleaning. *Five hours, third term. M. T. W. Th. F. 10-11.*

120. Thesis: Each candidate for a degree in civil engineering is required to prepare a thesis upon some engineering subject which he may select. It must be the record of original investigation of some engineering subject or an original design of some engineering structure or project. The applicant for a degree shall file a written announcement of his subject with the professor of civil engineering not later than October 1st of his senior year; and the thesis shall be completed and submitted for approval not later than May 1st. During the first term the candidate shall devote not less than four hours a week to reading and collecting data for his thesis; during the second term he shall devote not less than nine hours a week and during the third term until May 1st not less than three hours a week to work on the thesis. He shall submit on Monday morning of each week a written statement of the time he has devoted to thesis work during the preceding week.

The student is also required to prepare and hand in one report or paper during first term and one during second term on subject of thesis or some allied subject approved by the professor.

SUMMER CAMP AND SCHOOL OF SURVEYING

105. Practical work in plane and higher surveying supplementing the instruction given in courses 102 and 103: This work is given at the summer camp immediately after commencement, between freshman and sophomore years. The purpose of this course is to give the student uninterrupted practice in the solution of practical problems in surveying similar to those which he will meet early in his career as an engineer; and the course is in line with the policy of the institute to combine theory and practice in all its branches of technical instruction. Students in this course are required to make notes of all the work done by the party to which he is assigned and to compute and plot all surveys made by his party. The parties will be made as small as the conditions to the work will permit so as to give each student the greatest possible amount of practice with the instruments. This course is required of all students

who are candidates for graduation in civil or mining engineering, and requires *forty-eight hours per week for four weeks*.

110. Practical work in railway, highway, and hydrographic surveying: This course is also given in the summer camp, and is required of all students who are candidates for graduation in civil or mining engineering, and will be taken between sophomore and junior years. The work includes the preliminary location and construction, surveys for a short line railroad, (about 2 miles), with maps, profiles, and estimates for same; all surveys, maps, profiles and estimates for a short line of highway, (about two miles); surveys for a dam and lake formed thereby; also gauging of stream flow with current meter. The time required for this course is *four weeks, forty-eight hours per week*.

The Institute furnishes tents, cots, camp stools, and all equipment of mess tents. The student will furnish his own bedding, soap and towels. A charge of \$18.00, payable in advance, will be made for each course and will be applied to payment of the expense of the camp.

GRADUATE STUDENTS.

121. Graduate engineering course: This course requires three hours a week to be devoted to recitations and five hours a week to practical work in field or drafting room, throughout the session. The subjects may be varied to fit the needs of the students taking the course, but will be chosen from the following: Reinforced concrete; bridge design; sewerage and water supply; specifications and contracts.

122. Thesis: Graduate students applying for the degree of civil engineer will be required to prepare and present a thesis, the regulations governing thesis work being the same as those prescribed for seniors.

ELECTRICAL ENGINEERING.

PROFESSOR DUNSTAN

PROFESSOR HILL

LABORATORY ASSISTANT STEWART

JUNIOR CLASS

201. Elementary theory of electricity and magnetism: A detailed study of the fundamental phenomena and laws of the subject. *Three hours, first term. T. W. Th. 8-9.*

202. Direct current machinery: Lectures and recitations on the principles of design, construction, installation, and operation of direct current generators and motors. This course treats in detail of the selection of machinery for given conditions, performance guarantees, acceptance tests for heating

regulation, efficiencies, etc., parallel running troubles and remedies and repairs. A large number of carefully selected problems are assigned for solution and every effort is made to have the course cover not only the fundamental principles but also the broader engineering problems connected with the choice and use of this class of machinery. *Three hours, second term. T. W. Th. 9-10.*

203. Central station appliances and distribution for lighting and power service by direct currents: This course treats in detail of switch boards and appliances, calculation of circuits of various kinds, arc and incandescent lighting, metering, systems of charging for service, economics of generating plants. *Three hours, third term. T. W. Th. 9-10.*

204. Elementary theory of electricity and magnetism: For non-electrical engineering students. This course is similar to course 201, though not so detailed in treatment. *Two hours, first and second terms. T. Th. 9-10.*

204a. The construction and operation of both direct and alternating current machines; tests for efficiency, regulation and heating; the generation and distribution of electric power. In this course, it is intended to cover the application of electricity to the operation of machinery. For non-electrical students. *Two hours, third term. T. Th. 9-10.*

205. Electrical measurements and tests: For students in electrical engineering and mechanical engineering. The course consists of lectures and recitations upon the measurements of current, voltage, resistance, capacities, magnetic measurements, stray power, brake tests, heat runs, and related subjects. *One hour, entire session. M. 9-10.*

206. Laboratory work: For students in electrical engineering and mechanical engineering. The course consists of galvanometer work, resistance measurements of various kinds, magnetic measurements and various tests. *Four hours, first term.*

207. Laboratory work: For students in electrical engineering and mechanical engineering. The second term is devoted to the operation of direct current motors and dynamos, characteristics of direct current machinery, methods of adjusting, compounding, etc. *Four hours, second term.*

208. Laboratory work: For students in electrical engineering and mechanical engineering. Efficiency tests, location of troubles on machine and line, switch boards and appliances and general experience in the operation of a direct current station, are given. *Four hours, third term.*

209. Wiring and illumination. This course is intended to give a working knowledge of the laws of illumination and to in students in the writing of wiring specifications. The

work in wiring will cover the laws for the calculation of wires for lighting and power circuits, costs of wiring, and insurance rules governing the installations of wires. Problems will be worked in class covering the design of lighting schemes for special buildings. *Two hours, third term.*

SENIOR CLASS

210. Theory of alternating currents: Lectures, recitations and problems upon the phenomena of alternating current circuits, inductances, etc. The course is introductory to the subject of alternating current machinery, and in order to take it, students must have a fair working knowledge of differential and integral calculus and vector algebra. *Five hours, first term. M. T. W. Th. F. 8-9.*

211. Alternating current machinery: Lectures and recitations upon alternating current generators, calculation of alternator voltage, regulation by various methods, parallel running, transformers, induction motors, single phase commutator motors, synchronous motors, rotaries, etc.; harmonic analysis of wave forms, the expression of the same in Fourier series and calculation of the current produced in various circuits.

The course is somewhat advanced and in order to take it satisfactorily students must have a good knowledge of the mathematical theory of alternating currents. *Five hours, second term. M. T. W. Th. F. 8-9.*

212. Transmission lines: Lectures and recitations upon line inductance and capacity, the application of hyperbolic functions to the calculation of the regulation of long transmission lines, effect of harmonics in E. M. F. waves, surges, etc. Stresses in conductors, line construction and related topics. *Five hours, third term. M. T. W. Th. F. 8-9.*

213. Laboratory work: Operation of alternating current machinery, determination of data for calculation of alternator regulation, direct determination of regulation, efficiency tests, transformer connections, transformer testing for efficiency and regulation, induction motor testing, circle diagram. Brake tests, single phase induction motors, synchronous motors, V-curves, rotaries, synchronizing, etc. The work during the third term consists chiefly in the determination of data for the student's thesis. *Four hours, entire session.*

214. Electric railway engineering: A detailed study of the subject of street and interurban electric railway service covering train resistance, grades, curves, line and track, car and power plant equipment, both direct and alternating currents, sub-station, single phase equipment, and related topics.

The course consists of recitations and lectures with constant

reference to current numbers of various technical journals. *Two hours per week, one term. T. Th. 10-11.*

215. Telephone engineering: History and development of telephone types, designs of telephone parts, sub-station equipment, magneto and common battery switch boards, exchange equipment, telephone power plants, over head and under ground circuits, protectors, coin collectors and meters, party lines, private branch exchanges, first and intercommunicating systems, trunking, and toll boards. *Two hours, first and second terms. T. Th. 10-11.*

216. Telephone laboratory: Details of telephone construction, association of parts, assembly of switch board parts, storage batteries, tests for location of faults in cables and lines, capacity and insulation tests, details of common battery and magneto switch boards, trunking schemes, etc. *Two hours, first and second terms. T. Th. 2-4.*

217. Electrical engineering: For senior mechanical engineering students. Direct current motors and generators, street railways, circuits, alternating currents, and alternating current machinery. This course is less detailed than the courses for electrical engineering students, but aims to cover the field in a more generalized manner. *Three hours, first term. M. W. F. 10-11.*

218. Laboratory work for seniors in mechanical engineering. This course is given in connection with course 217, and gives practice in the operation and testing of electrical machinery of various kinds. *Four hours, first term.*

219. Contracts and specifications: For seniors in the courses of electrical engineering and mechanical engineering. Lectures and recitations upon engineering specifications and the elements of the laws of contracts. Considerable time is devoted to exercises in writing specifications covering machinery and engineering projects. These specifications are read to the class and the students are required to offer criticism on each set. *Two hours, third term. T. Th. 10-11.*

220. Power plant: For students taking the special course in applied electricity. The purpose is to familiarize the student with the operation of engines, pumps, generators, motors, switch board appliances and boilers. All students in this course are expected to work under the power house engineer. *Four hours, entire session.*

WIRELESS TELEGRAPHY

221. In response to a considerable demand it has been decided to offer a special course in wireless telegraphy. The practice work in this subject will be under the charge of a licensed wireless operator. Every effort will be made to offer

to students opportunities to become familiar with the setting up, installation, and testing of wireless apparatus, as well as becoming expert in sending and receiving.

Wireless messages are constantly being picked up with the wireless station, these messages coming from ships at sea, and from various wireless stations along the Atlantic Coast.

The requirements for entrance to this course will be similar to those for entrance upon the two-year course in applied electricity.

The course of study is the same as that of the first year in the two-year course in applied electricity, with the exception that four hours of wireless telegraph study and practice will be substituted for four hours power house work.

MECHANICAL ENGINEERING.

PROFESSOR WILMORE

ASSISTANT PROFESSOR HIXON

INSTRUCTOR STOKES

ASSISTANT HALE

LABORATORY ASSISTANT DUGGAR

LABORATORY ASSISTANT HAMILTON

LABORATORY ASSISTANT LEVIE

LABORATORY ASSISTANT ROSS

LABORATORY ASSISTANT SELMAN

The following courses are offered in this department:

FRESHMAN CLASS.

Students who have credit for a course satisfactorily completed in an accredited high school will be assigned to other work.

351. Shop work—carpentry: The lessons include instruction in the nature and use of tools; instruction and practice in shop drawing; elementary work with the plane, saw, chisel; the construction of different kinds of joints, timber splices, cross joints, mortise and tenon, mitre and frame work, and dove tail work, comprising different joints used in cabinet work, and examples of framing roof trusses. Students who have had previous experience in the use of tools or who show a special proficiency, are given work of an advanced character. *Six hours, one term.*

352. Shop work—wood turning: The instruction includes the nature and use of the lathe and tools, and lessons comprise plain, straight turning, caliper work to different diameters and lengths, simple and compound curves, screw plates, and chuck work, hollow and spherical turning. *Six hours, one term.*

353. Shop work—pattern making: The course includes work in whole and split patterns in wood for solid and cored castings and core boxes for producing the necessary cores. The characteristics of the different kind of timbers used for patterns are studied, and attention is called to allowances necessary for shrinkage and draft. The patterns are intended to be used by the students in their subsequent work in the foundry. *Six hours, one term.*

SOPHOMORE CLASS.

312. Applied mechanics: Required of students in engineering courses. The fundamental laws of mechanical science are studied while special attention is given to the practical application of these principles to engineering work. *Three hours, second and third terms. M. W. F. 8-9.*

361. Shop work—forging: A text-book is used from which is learned something of the characteristics of the metals and the best methods for working them. The lessons are so arranged as to make the student familiar with the handling of the tools and the successive steps in working metals by hand. Exercises in drawing, upsetting and bending, cutting, punching, and welding by various methods, are given, together with a course in steel forging, including hardening, tempering, and case hardening. *Four hours, first term.*

362. Shop work—foundry: Required of all students except those taking agriculture. The work for the most part consists of small articles, such as light machine parts and stock pieces used for the exercise work in the machine shop. A sufficient variety is introduced for the student to acquire a good general knowledge of the usual methods and appliances used in light foundry work. Most of the work is in green sand and two part flasks, but some core work and more complicated work is introduced to illustrate the processes, as well as to furnish the castings for the advanced work in the machine shop. Instruction is given in operating the cupola, and from time to time lectures and recitations are held on the metallurgy of the metals used in the industrial arts. *Four hours, second term, and five hours third term.*

JUNIOR CLASS.

321. Practical mechanics: Required of students who take machine shop work. The instruction consists of recitations and lectures on general machine shop work. The construction, use, and limitations of the various machine tools, the forms of cutting tools and methods of grinding them, and the form and use of jigs and gauges, are studied, together with instruction in machine management, and time and cost keeping. *One hour, entire session. Th. 10-11.*

322. Strength of materials: Required of students in the engineering courses. The properties and characteristics of the materials of engineering construction are studied, and the development of the methods of calculating their strength under different conditions of stress is explained. Many problems involving the strength of beams, girders, columns, and shafts are worked out. *Three hours, first term. M. W. Th. 8-9.*

323. Engines and boilers: Required of juniors in civil engineering, architecture, architectural engineering, and of the first year students in the course in applied electricity. An elementary descriptive course in which attention is called to the different types of engines and boilers, and methods of setting, valve gears and valve setting, piping systems and auxiliary apparatus for power plants. *Three hours, first term. M. W. F. 10-11.*

324. Gas engines: Required of seniors in chemical engineering, juniors in civil engineering, architectural engineering, and the first year students in the two-year course in applied electricity. A descriptive course in gas, gasoline and oil engines; different types, different cycles, carburetion, ignition, troubles and remedies. *Three hours, second term. M. W. F. 10-11.*

325. Transmission of power: Required of juniors in civil engineering, architectural engineering, and of the first year students in the two-year course in applied electricity. Shafting, pulleys, bearings, belting, gearing, aligning of shafting, calculation of pulley and gear sizes, power of belts, lubrication and lubricating systems. *Three hours, third term. M. W. F. 10-11.*

371. Shop work: Required of students in the courses of mechanical engineering and electrical engineering. This work is divided into two parts:

(a) A course of chipping and filing: The lessons comprise work on cast iron and wrought iron, and consist in chipping to line on flat and curved surfaces, key seating, filing and finishing to line, surface filing, slotting, pin and screw filing, and surface finishing with scraper.

(b) A course in machine work: The materials worked on include cast iron, wrought iron, steel and brass. Exercises are given in turning to various diameters and lengths, taper turning, facing with chuck and face plate, drilling in the lathe and drill press, reaming, boring, screw cutting in lathe and with taps and dies. Practice is given in working the planer, shaper, and milling machine. In the last part of the year some work in tool making is given, such as making taps, reamers, and milling cutters. Some sort of construction or repair work for the department is always on the shop floor and students who are well advanced in this work have opportunity to gain

additional practice and experience by assisting with this. *Six hours, entire session.*

374. Shop work: Required of students in the course of mining engineering and elective for juniors in the course of civil engineering. The work includes course (a) and (b) as described in course 371 just preceding, except the amount of work required is less in proportion to the time consumed.

All shop work is done from blue prints and blackboard sketches. For the preliminary exercise work, special instruction sheets are prepared and given out to each student with stock for the exercises. These sheets explain in detail each step in the process of producing the exercise, and are intended to supplement individual instruction of the instructor. In the construction work it is the purpose to select some simple machine and build two or more of them on the interchangeable system. Jigs and templates are built to accomplish this result as far as possible. A system of timekeeping is in force in the shop. At the end of the week each student makes out his time card, describing the work he has done during the week, and giving the number of hours spent on each job. *Four hours, entire session.*

377. Laboratory: Required of juniors in the course of mechanical engineering and electrical engineering. The work will consist in the adjustment and calibration of instruments used in engineering work, and the adjustment and operation of gas, gasoline and steam engines. Tests will be made to determine the efficiency of mechanisms such as hoists, jack screws, gearing, belts and other transmission devices, together with some work in valve setting and power measurements of steam engine. Complete and accurate written reports of each experiment are required. *Two hours, third term.*

378. Laboratory: Required of second year students in the two-year course in applied electricity. The work will consist of the calibration of instruments, indicator work, valve setting, fuel and furnace gas analysis, and lubricant testing. *Three hours, second term.*

SENIOR CLASS.

331. Thermodynamics: Required of students in the courses of mechanical engineering and electrical engineering. This course includes a study of the fundamental principles underlying the transformation of heat into work. The so-called perfect gases are first studied, and later the applications to the various vapors used in commercial work. The cycles and efficiencies of steam engines, internal combustion engines, hot air engines, air compressors, and refrigerating machines are studied. Instruction is given in indicator practice and the in-

terpretation and working up of indicator diagrams. *Five hours, first term. M. T. W. Th. F. 12-1.*

332. Power plant engineering: Required of students in the courses of mechanical engineering and electrical engineering. A study is made of the practical applications of power plant machinery. The different elements are considered and the efficiencies of different combinations discussed. Problems are worked involving the designing of plants for a specific service, including estimates of cost and operating expense. Extensive files of manufacturers' catalogs are kept and technical papers and magazines are freely consulted. *Five hours, second and third terms. M. T. W. Th. F. 12-1.*

333. Hydraulic power: Required of seniors in mechanical engineering and elective for seniors in electrical engineering. The elementary principles of mechanics of fluids are studied. This is followed by a discussion of the theory of hydraulic turbines and pumps, including their design, installation, and operation. *Five hours, second term. M. T. W. Th. F. 10-11.*

334. Heating and ventilating: The different methods of heating and ventilating buildings are treated. A study is made of the relative efficiency of hot water, steam and warm air as mediums for heating different kinds of buildings, and special attention is given to the design and operations of healthful heating systems for residences. *Two hours, first term. T. Th. 8-9.*

336. Refrigeration. Required of students in the course in mechanical engineering. The theory of the refrigeration process is studied together with its applications to commercial plants. The advantages of the various mediums, as ammonia, carbon dioxide and others are discussed, as well as methods of insulation and plant arrangement. *Two hours, second and third terms. T. Th. 8-9.*

381. Laboratory: Required of students in mechanical engineering and electrical engineering. This work includes fuel analysis and heat determination, flue gas analysis and the study of combustion, oil and lubricant testing, and valve setting and indicator analysis. *Four hours, first term.*

382. Laboratory: Required of students in mechanical engineering and civil engineering and optional in electrical engineering. The course includes work in testing the strength of materials, as iron, steel, wood, and cement in tension, compression, and transverse loading, and the calibration of weirs, nozzles, and meters, a study of the flow of water in pipes, and the testing of hydraulic motors and pumps. *Four hours, second term.*

383. Laboratory: Required of students in mechanical engi-

neering and electrical engineering. The work includes tests of engines, boilers, pumps, gas and gasoline engines, complete power plants, and when opportunity offers, tests of commercial power plants. *Two hours, third term.*

384. Thesis: Each applicant for a degree is required to prepare and hand in a thesis. This thesis may consist of a design, a study of some engineering problem involving a series of tests, or a study involving the collection and analysis of data and material on some engineering subject with a statement of definite conclusions derived therefrom. Preliminary work shall begin with the first term and weekly reports of progress made. The thesis proper shall be handed in to the professor in charge not later than May 1st. The student shall prepare and hand in two papers or reports on some portion of his thesis or some allied subject, approved by the professor, one during the first term and one during the second term. Credit as laboratory work. *Two hours, first and second terms, four hours, third term.*

GRADUATE STUDENTS.

391. Laboratory: This course is arranged to suit the work being carried by the student, and the hours are adjusted to suit their available time.

341. Steam turbines: The theory, design and structural details of the different types of modern steam turbines are studied, and complete designs are worked out. *Three hours, first term. M. W. F. 8-9.*

342. Power plant design and economics: The economics of power plant design, the relation of the different elements of a power plant to each other, and the conditions of maximum efficiency are studied. Plants are designed to give the highest efficiency under specified conditions, and actual plants are studied to discover, if possible, sources of additional economy in operation. *Three hours, third term. M. W. F. 8-9.*

343. Works management: Methods of cost keeping, systems of organizing and paying labor, depreciation of plant, accounting and business organization are studied. Many problems are solved, including the layout of buildings and machinery for manufacturing plants. *Three hours, third term. M. W. F. 8-9.*

SPECIAL STUDENTS.

Special students who have the necessary preparation may be admitted to any of the classes in this department. Students who, for any reason, are not able to remain in college to complete the full course, but who wish some training in drawing and shop practice, are permitted to become irregular students. This plan may be advantageous to young men who contemplate entering the mechanical trades either preceding or following

the apprenticeship period. In many cases this work has been accepted as equivalent to a part of the apprenticeship period and the time of the latter shortened thereby. The drawing and mathematics are invaluable tools in any of the trades, and work in the different shops enables the apprentice to become familiar with the principles of the trades allied to his own.

MINING ENGINEERING AND GEOLOGY.

PROFESSOR BROWN.

JUNIOR CLASS.

401. Mine surveying: All general surveying as given by the civil engineering department previous to the junior year is required for this course. The work covers general surveying methods as applied to conditions prevailing at mining properties, both underground and at the surface. The student is required to work out practical problems that he will be likely to meet in actual practice. *Five hours, first half of first term. Daily 9-10.*

Text-book: Durham's Mine Surveying.

402. Coal mining: For those who have taken course 401 and its prerequisites. This course includes the following:

Examination of coal properties; drifts, slopes and shafts; methods of working; plans of mines; coal-cutting machinery; trackwork, haulage, mine ventilation; coal washing; coking in beehive ovens; by-product coking. *Five hours from first mid-term to end of session. Daily 9-10.*

403. Junior drafting: The course includes freehand lettering, mapping, detailed drawings to scale of various structures relating to mines, design of mine cars, design of ventilating fans. *Five hours, entire session. W. 2-4, F. 2-5.*

404. Summer course: The summer field work will deal with graphite mining and milling, mica and pyrite mining in Clay County, marble quarrying and milling at Sylacauga; brown ore mining in Shelby County; coal mining, washing and coking, iron ore mining and mine rescue work at Birmingham. Surveys and reports will be required. *Four weeks, immediately following commencement, between junior and senior years.*

SENIOR CLASS.

411. Mining: Modes of occurrence and origin of the various ores and economically valuable mineral deposits. Prospecting and examination of mineral properties, including boring by different methods. Methods of opening up mineral deposits, breaking ground, supporting excavations, developing and working coal and metalliferous deposits, haulage, hoisting, drainage,

ventilation, lighting and provisions for ascent and descent. The last term is devoted to the design of mine structures such as head frames (timber and steel), coal tipples, mine buildings. *Three hours, entire session. M. W. F. 12-1.*

412. Drafting. Map work consisting of plotting of notes taken on summer trip between junior and senior years; drafting accompanying design of mine structures; original work in connection with thesis. *Four hours, entire session. W. F. 2-4.*

413. Laboratory course: For seniors in mining engineering and chemistry and metallurgy. The work includes crushing, sampling, concentration, stampmilling, amalgamation, and cyaniding. *Three hours, entire session. S. 10-1.*

Text-books: Coal and Metal Miner's Pocket Book, and International Text Books.

421. Graduate course: This course is offered to those who desire to pursue the subjects related to mining beyond the scope to which the two years' course limits them. The work will be arranged to meet the requirements of those desiring to take it.

GEOLOGY.

JUNIOR CLASS.

431. Crystallography: For students in the courses in civil engineering, mining engineering, and chemistry and metallurgy. A thorough study is made of the crystal systems with the aid of a full set of crystal models and natural crystals. Special emphasis is laid upon the more practical features which will be of service in further mineralogical work. *Four hours, first mid-term. Tu. Th. 2-4.*

Text-book: Bayley's Elementary Crystallography.

432. Mineralogy: For juniors in the courses of civil engineering, mining engineering, and chemistry and metallurgy. The course consists of a thorough study of a large number of minerals from the standpoint of their physical characteristics. A good type collection of minerals is kept in the laboratory for comparison. An effort is made to have the students become familiar with economically important ores and non-metallic minerals, and the common rock-forming minerals so that he can identify them at sight by the application of a few simple tests. *Four hours, one and one-half terms. Tu. Th. 2-4.*

Text-book: Butler's Handbook of Minerals.

433. Lithology: For those who have satisfactorily completed course 432. This deals with the combination of minerals in the make-up of rocks, and aims to bring out structure, texture, crystallization and mineralogical composition sufficiently to enable the student to recognize the commoner rocks in the sedimentary, igneous and metamorphic classes. *Four hours, third term. Tu. Th. 2-4.*

Text-book: Kemp's Handbook of Rocks.

434. Agricultural Geology: For juniors in agriculture. This course deals with the operation and results of geological processes as follows: weathering and rock disintegration, work of winds, work of underground waters, rivers, river deposits, river valley cycle, glaciers and glaciation, lakes and swamps, shore lines, plains and plateaus, movements of ocean waters, characteristics of the atmosphere, light and warmth in the atmosphere, rain and other forms of water, winds, storms and climate. *Four hours, second term. M. Tu. Th. F. 10-11.*

Textbook: Tarr & Martin's College Physiography.

435. General geology: See course 441.

436. Engineering geology: The rock forming minerals; the general characters, mode of occurrence and origin of rocks; structural features and metamorphism of rocks; rock-weathering; surface waters; underground waters; landslides and their effects; wave action and shore currents; lakes, their origin, and relation to engineering work; glacial deposits, their origin, structure and economic bearing; building stone; limes, cement and plaster; clay and clay products; coals; petroleum, natural gas and other hydrocarbons; road foundations and road materials; ore deposits. Required of juniors in architectural engineering, special students in mining engineering, and elective for seniors in civil engineering. *Two hours, entire session. Tu. Th. 12-1.*

SENIOR CLASS.

441. General geology. For juniors in the courses of mining engineering, and chemistry and metallurgy, and for seniors in the courses of civil engineering and general course. The course covers dynamic geology, structural geology, geomorphology, and historical geology in the order named. The lectures and recitations are supplemented by laboratory instruction and geological excursions. *Two hours, entire session. Tu. Th. 8-9.*

Text-book: Chamberlain and Salisbury's College Geology.

442. Economic geology, non-metallic minerals: For seniors in the courses in mining engineering, and chemistry and metallurgy. The course is presented by lectures and recitations and includes the study of modes of occurrence, distribution, origin and uses of coal, petroleum, limestone, salines, gypsums, fertilizers, abrasives, minor non-metallic minerals and mineral waters. *Two hours, first term. M. W. 8-9.*

Text-book: Reiss' Economic Geology of the United States. (Revised.)

443. Economic geology, metallic minerals: For students who have taken course 442. The work includes a study of the ores of iron, copper, lead, zinc, gold, silver, silver-lead, aluminum,

manganese, mercury, and the minor metals. *Two hours, third term. M. W. 8-9.*

Text-book: Reiss' Economic Geology of the United States. (Revised.)

444. Methods of teaching physical geography: Especially adapted to the secondary schools of the State. In the course in general geology will be found much that is especially applicable to physical geography. It takes up a study of subterranean and surface agencies both as to their destructive and constructive processes. The results of these processes are then taken up in a study of the topography of the surface of the earth and under the following heads: The geographic cycle; land sculpture; topography as determined by faults and joints; adjustment of rivers; sea coasts; mountain ranges. Students desiring extra work in this subject may arrange for a three-hour course. *Two hours a week, first and second terms.*

MACHINE DESIGN AND MECHANICAL DRAWING.

PROFESSOR FULLAN.

ASSISTANT PROFESSOR THOMAS

ASSISTANT DOUGLAS.

The following courses are offered in this department:

FRESHMAN CLASS.

601. Mechanical drawing: This course in drawing is of general educational value, and is required of students in all courses. The object of the course is to train the mind through the eye and hand with the applications of geometry to drawing. Accuracy, neatness, and the correct use and the care of instruments, are given special attention.

The work is given in the following order:

- (1) Freehand drawing and freehand lettering.
- (2) Linear drawing—geometrical construction.
- (3) Orthographic projection, sections and intersections.
- (4) Development of surfaces and the construction of models.
- (5) Isometric, Cavalier, and dimetric projections.
- (6) Study of working drawings, making tracings and blue prints.
- (7) During the third term, in lieu of (5) above, a course in agricultural drafting is given freshman students in agriculture, and is arranged for the purpose of assisting them to a knowledge of the principles of mechanical drawing and their application to the farm. The course consists of drawings in the following lines of work:

(a) Farm maps: Topographical drawing; topographical conventions; maps and plots; layout for farm buildings, out-houses and grounds.

(b) Building construction: Plan, elevation, and section; details, framing joints; building materials, layout of plumbing and water supply on the farm; plans for barns, hayracks and roof construction; and framing for houses, etc.

(c) Concrete forms: Simple forms; steps and stair forms; wall forms; layout of forms for silo building; watering troughs and fence posts.

(8) During the last half of the year, in lieu of (5) and (6), a course in hand work correlated with drawing is offered to young women. The course is arranged with a view of giving training in vocational and industrial lines and consists of a short course in the elements of industrial education as follows:

(a) Paper cutting and folding: The construction of boxes, baskets and booklets.

(b) Basketry: Several baskets of native materials from pine needles and corn husks.

(c) Print block and stencils: The design of print blocks, and the cutting of stencils for decoration.

(d) Wood whittling: The making of articles of use from thin wood with simple tools.

(e) Clay modelling: Elementary clay modelling with tools made by the student and including the treatment of geometrical, botanical, animal and commercial forms; reproduction of the designs in basketry is included in the course.

(f) Art metal work: Articles of copper, brass and iron are wrought by the student with a few simple tools.

Freehand drawing of geometrical subjects is given early in the course. It provides training of a certain definite nature by developing close observation and accuracy in representing the forms of models used in the work. Freehand lettering of standard practice is strongly emphasized throughout the entire course. The construction and application of Roman and Gothic capitals and small letters to working drawings and the arrangement and design of formal titles are treated in this division.

Under the head of linear drawing, special attention is given to the proper use and care of instruments. The most useful of the geometrical constructions are worked out in pencil and afterwards carefully inked.

Orthographic projection with sections and intersections is given in the beginning of the second term, and is a prerequisite to course 602 in descriptive geometry. Developments of surfaces are made, and paper models of the objects are constructed from these developments. The construction of these models

has the property of more firmly fixing the principles involved in the preceding division in the mind of the student and is given special attention.

In the third term pictorial representation of objects are given by means of single-view projections, isometric, cavalier, and dimetric. The paper models made by the pupil are now used for subjects. A number of working drawings of familiar objects are required in the last part of the year. Penciled drawings to scale, tracings and blue prints of these objects are made by each member of the class. *Five hours, entire session. M. T. W. Th. F. 12-1.*

SOPHOMORE CLASS.

602. Descriptive geometry: Required of all students preparing for engineering and architectural courses. The work is given by lectures, written recitations and drafting room instruction. In this course theory and practice are combined with the purpose of training the student in the graphical expression of ideas. The instruction includes problems relating to the point, straight line, and plane; tangents and normals; to cylindrical, conical, and warped surfaces, to sections, intersections, and developments; to shades, shadows, and perspective; and is intended to develop in the mind of the student a clear concept of magnitudes in space. The lectures and written recitations are to impart principles and to permit the instructor to meet the entire class, and, with diagrams and models, supplement the work of the text. The drawings, two hours per week, consists of plates of problems, which are selected from the text-book and other sources. *Four hours, entire session. T. 9-10, Th. 11-12; Drawing two hours. M. T. W. 2-4.*

JUNIOR CLASS.

604. Kinematics of machinery: Required in the courses of electrical engineering and mechanical engineering. Under this head machines are analyzed and their elementary combinations of mechanism are studied. Motions and velocities, instantaneous centers, kinematic chains, velocity diagrams, parallel and straight line motion mechanisms,, are given early in this course. The communication by means of gear wheels, belts, cams, screws, and link work, and the different ways of obtaining definite velocity ratios and definite changes of velocities in machine parts are investigated. Problems designing quick motions, trains of mechanisms for various purposes, and gear trains are treated. Illustrated lectures with the lantern, showing practical applications of mechanism to the design of machinery, are given at intervals throughout the course. *Three hours, second and third terms. M. W. Th. 8-9.*

605. Graphic statics of mechanism: Required in courses of electrical engineering and mechanical engineering. The lectures provide a brief course in graphic statics, graphical statics of mechanism, and in the design of structures, including roof trusses for factory buildings, crane frames, girders, and water-tank towers. The stresses in machines and structures are investigated by graphical methods, which are carefully checked in the beginning, by analytical proofs. This course includes the solution by graphical methods of such problems, before which analytical methods are comparatively impotent, as those which involve the friction losses in machines, and of the determination of the efficiency of mechanisms. The graphical method is also applied to dynamics by problems in the balancing of engine crankshafts working under specified conditions. The use of manufacturers' handbooks and drafting-room practice are given special attention. *Two hours, first term. W. 10-11, Fri. 8-9.*

606. Machine design: Required in the courses of electrical engineering and mechanical engineering. Instruction is given in the design of fastenings and machine parts, and in the general methods of arranging views. This course includes the design of cams, gear tooth outlines, quick-return motions, and link-work combinations, which supplements course 604, in kinematics. Scale drawings of simple machines are made from dimensioned sketches, which each student makes for himself from an actual machine or model. Tracings and blue prints are made from these drawings. All the instruction is intended to familiarize the students with modern drafting-room methods.

606 (a). Inventive design: At intervals during the session problems are proposed to the class which involve both invention and design. The problems are given in a serial order and are progressive; they are selected with a view of developing the inventive capacity of the student. The inventions are submitted as the work of the student alone, and must contain complete drawings and full specifications in form corresponding to that required by the United States Patent Office. The designs are graded on the basis of the originality, adherence to specifications, clearness of drawings, accuracy, and neatness. The early problems consist of the design of simple mechanical devices requiring only well-known principles; in the later inventions are involved and bring into use the theoretical principles pursued in electricity, mechanics, and physics. *Three hours, first term; five hours, second and third terms. Tues. and Fri., 8-9; Wed. 10-11.*

SENIOR CLASS.

607. Machine design—lectures: Required in the courses of mechanical engineering and electrical engineering. These lectures are intended to cover the general instructions to the students, such as the selection of materials for different machine parts, the rules for proportion of parts to secure strength, symmetry, and cheapness of manufacture, and the best methods of making, recording and preserving the calculations incidental to the design of a complete machine. Much valuable engineering data of current nature in the form of notes are given as a supplement to the text-book. Illustrated lantern lectures on subjects related to the course are given at intervals during the year. *One hour, first term; two hours, second and third terms. 9-10 Thu. and Sat.*

608. Machine design—drawing: Required in the course in mechanical engineering. This is a continuation of the junior course in machine design. Original problems involving the design of complete machines to work under specified conditions are assigned, and the student develops the idea in the form of sketches. These are submitted to the instructor for criticism and are afterwards embodied in complete detail and assembly drawings. The calculations of each design are written up neatly and filed with the drawings. Special attention is given to the strength of the parts, to the harmonious and symmetrical appearance of the complete machine, and to the details as regards practical manufacture. *Six hours, entire session. Fri. 2-5, Sat. 10-1.*

609. Machine design—drawing: Required in the course in electrical engineering. The work given and the methods pursued are similar to those described in course 608, just preceding, but the amount of work required is reduced in proportion to the amount of time given to the subject. *Three hours, entire session. Sat. 10-1.*

610. Engineering writing: This course is arranged for senior students in the engineering branches and is required in courses of civil, electrical and mechanical engineering. Its purpose is to familiarize the student with the different forms of technical writing, and to provide exercise with written work; to pursue study of trade catalogs, technical magazines, scientific papers, and technical nomenclature. Course in Composition (Ac. 102a) is a prerequisite for this course. A loose-leaf note book, containing the written work, is submitted by the student each week, and is the basis for the evaluation of the term grade. The lectures and laboratory work are arranged as follows:

- (1) Lectures: complete notes required.

(2) Graphic Methods of Presenting Facts: study of charts, curves and diagrams.

(3) Engraving Processes: photo-engraving; wax-engraving; prepare drawings for copy for illustration.

(4) Photographic Illustration: use of camera; selection of views for cuts, use of "skeleton" and "x-ray" photo-illustrations.

(5) Study of Trade Catalogs: preparation of a simple trade catalog for manufactured article.

(6) Study of Current Engineering Writings: patent office reports; periodicals, magazines and scientific papers.

(7) Visit to power manufacturing plant: preparing complete article from notes, illustrated with photographs, charts, diagrams and drawings. *Three hours, first term.*

611. Home Industries—industrial art (vocational): This course is a continuation of the work given in 601 (8), without which it cannot be pursued. The work is arranged for the needs of students of the sophomore and junior classes who intend to teach this branch, men and women, but is particularly suited to the latter—teachers and homemakers. The subject matter is varied and adapted to the rural school as well as the high school. Home Industries, which includes the making of articles of use for the home, is given important consideration. A large part of the course consists of training in vocational lines that lead to the industries. The work is given by lectures and laboratory practice—one lecture and six hours practice per week. The divisions of the course are as follows:

(a) Paper work: Advanced work with paper and cardboard. Design and construction of booklets, place cards, candy baskets; bookbinding; sewing, pasting and finishing books.

(b) Basketry: Work in reed, raffia, and native materials—pine needles and corn husks. Tea mats, sewing baskets, fruit baskets, sandwich trays, jardiniers, electroliers.

(c) Stencil Cutting and Design: Preparing the stencil board; design of stencils for decoration of booklets, textiles, and walls; compound stencils for the production of posters, etc.

(d) Wood-work: Advanced work in wood with the knife and coping saw; use of carpenter's tools; gluing, nailing, finishing and decorating.

(e) Clay Modelling and Plaster Casting. Making of modelling tools; advanced work in clay and plasticine; reproduction of models in plaster; finishing the plaster casts.

(f) Art Metal Work: Design and construction of articles in iron, copper, brass, and silver; soldering and brazing; enameling; finishing metal work—bronzing and oxydizing.

(g) Weaving: Construction of primitive loom and the weaving of rugs and pillow covers, etc.; design and weaving of pattern work on the Swedish loom; dyeing of materials; decorating plain woven work with stencil patterns.

(h) Refinishing Furniture: Removing old stain and varnish; use of stain and varnish; preparing homemade stain—Old English, weathered, and mission; enamel and ivory finishes; use of stencils in furniture decoration.

(i) Pattern Drafting: Drafting of patterns for making clothing with the application of the principles of mechanical drawing; making stuffed form for testing the drafted patterns.

GRADUATE STUDENTS.

612. The work offered during the post-graduate year is an extension of that of the senior year. More of the theory of the subject is taught, more intricate machines are involved, and problems are given involving the design of a series of machines for manufacturing some specific article. The problems arising in the design of a line of machines of different sizes are also taken up, including the applications of graphical methods and the use of factors of enlargement in reduction. Special attention is given to the effect of current practice on the proportion of machine parts.

A research study into the Patent Office records or some machine or device is offered in this course. This feature is to develop the inventive capacity of the student, and is given special attention.

Suitable text and reference books are used.

613. Methods of teaching drawing and descriptive geometry: A course in the methods of teaching drawing and descriptive geometry is given to those who wish to prepare for teaching these branches. This course includes advanced work in shape of problems, supplemented by frequent conferences with the instructor, a full bibliography of works on the subjects, and an extended course in reading.

Those who desire to avail themselves of an opportunity to practice the teaching of these subjects may be permitted to attend the meetings of the large classes in elementary work for the purpose of observing methods of teaching.

Those who show sufficient preparation may be allowed to assist in tutoring delinquent students and those who enter conditioned.

Special attention is given to the subject of drawing as taught in high school work.

614. Thesis: A thesis taken in this department may be a study of some machine or its parts; research in records of subjects relating to the work of the department; or, a study of cur-

rent practice in the design of some specific machine. It is required to be written in parts, one of which is to be presented at the end of each term. The complete thesis is due on May 1st.

TEXT--BOOKS.

Cross' Mechanical Drawing, Jamieson's Isometric Drawing, Smith's Essentials of Descriptive Geometry, French's Engineering Drawing, Keown's Mechanism, Spooner's Machine Design, Smith and Marx's Machine Design, Cathcart and Chaffee's Graphics, Halsey's Handbook Machine Design, Frost's Good Engineering Literature, Watt's Composition of Technical Papers, Brinton's Graphic Methods for Presenting Facts.

ARCHITECTURE.

PROFESSOR BIGGIN.

The department of architecture was established in June, 1907. Four-year courses are offered in architecture and architectural engineering, both leading to the degree of Bachelor of Science. The freshman and sophomore years of these courses are respectively alike, affording the student ample opportunity for investigation before making a choice. The schedules conform to the "standard minima" of the Association of Collegiate Schools of Architecture. A two-year special course in architecture is offered for the benefit of mature draftsmen, and a certificate given on completion.

The first requirement in architecture is the ability to design, from the artistic side, that the structure may please the eye, and from the practical one, that it may suit its purpose. Next in importance are the engineering studies necessary for proper construction. Finally the student must acquire the fundamentals of that broad cultural training everywhere recognized as indispensable to an architect's success.

Architectural design is taught on the basis of problems requiring a month or more for solution, and developed by the student under constant personal criticism. These are accompanied by short sketch problems to promote quickness of thought and execution, with no criticism until after they are turned in for judgment. Freehand drawing in some form runs throughout the entire course in architecture. History of architecture is taught by lantern lectures, accompanied by library research work and sketching; for students in architecture this is followed by historic ornament and short courses in the history of painting and sculpture.

A general course is given in building construction and superintendence, with the preparation of working drawings, details, specifications and contracts. This is supplemented by special

work in the various engineering departments of the college, along such lines as heating and ventilation, wiring and illumination, reinforced concrete and steel frame construction. Of foreign languages, French is the most useful to the architect and is required.

Students who at the close of the sophomore year elect architectural engineering, devote less of the remaining period than those in architecture to the subjects of design and history. They are also not required to take water color painting, life class, clay modeling, or a foreign language. The time thus saved is occupied in engineering studies and advanced construction.

During the summer months all students in the department are required to spend one month or more in the offices of practicing architects, or follow a prescribed course in library research work and sketching; examinations are held on this in the fall, and college credit is given.

The following courses are offered in this department:

FRESHMAN CLASS.

11. Freehand drawing: Work in pencil and wash from casts of architectural ornament, architectural fragments and parts of the figure. Out-of-door sketching. *Four hours, entire session. T. Th. 2-4.*

15. Shades and Shadows: Delineation of architectural shades and shadows. This course must follow or be accompanied by descriptive geometry. *Three hours, lectures and drafting, first term. M. W. F. 11-12.*

17. Perspective: Theory and practice of architectural perspective, and methods of rendering. This course must follow or be accompanied by descriptive geometry. *Three hours, lectures and drafting, third term. M. W. F. 11-12.*

19. Elements of architecture: The classic orders of architecture and elementary studies in composition, with drawings rendered in India ink. This course must follow or be accompanied by descriptive geometry. *Six hours, lectures, library research and drafting, entire session. M. F. 2-5.*

SOPHOMORE CLASS.

21. History of architecture: Origin and development of historical styles of architecture from the earliest times to the fall of the Roman Empire; the Moslem irruption; Romanesque and Gothic architecture. Typical examples are studied in detail and for this purpose the lantern is in constant use. Stress is laid on the evolution of a style from changes in structural forms, political and religious conditions and national character. Prerequisite course: Ancient and medieval history; stu-

dents who have not offered this for entrance must take it before the sophomore year. *Three hours, lectures, library research and sketching, entire session. M. W. 7-8, T. 9-10.*

25. Charcoal drawing: Work in charcoal and wash from casts of architectural subjects, antique sculpture and from life. Out-of-door sketching. Prerequisite course: Arch. 11, or its equivalent. *Six hours, entire session. M. F. 2-5.*

27. Pen and ink rendering: Given with special reference to the rendering of architectural subjects. Prerequisite course: Arch. 11 or its equivalent. *Four hours, third term. T. Th. 10-12.*

29. Architectural design: A study of architectural composition; problems in design, composition, planning, motives, details and rendering. Prerequisite course: Arch. 19, or its equivalent. *Twelve hours, lectures, library research and drafting, entire session. T. 2-4, W. 2-5, Th. 9-10 and 2-4, S. 9-1.*

JUNIOR CLASS.

31. History of architecture: Continuation of the technical and historical study of architecture; the Renaissance and modern times. During the second term particular attention is given to architectural development in the United States. Prerequisite course: Arch. 21. *Three hours, lectures, library research and sketching, first and second terms. T. 9-10 and 7-8, Th. 7-8.*

32. Historic ornament: An analysis and study in detail of the main historic lines of decoration, with a brief outline study of the development of mosaic, ceramics, stained glass, ornamental metal work, textile fabrics, furniture and other minor arts. Prerequisite course: Arch. 31. *Three hours, lectures, library research and sketching, third term. T. 9-10 and 7-8, Th. 7-8.*

33. Building construction—masonry: Foundations, footings and walls; limes, cements and mortars; stones and stone cutting; stone and brick masonry; terra cotta; concrete; plastering; fire resisting construction. *Three hours, first term, M. W. F. 9-10.*

34. Building construction—carpentry: Properties and uses of various woods; seasoning and preservation of timber; methods of framing; exterior and interior finish; slow-burning and mill construction; sheet metal work; elevators; painting and glazing; hardware. *Three hours, second term. M. W. F. 9-10.*

35. Plumbing and drainage: General sanitation; water supply, filtration and softening; pumping and storage; fire lines, supply, vent and waste systems; plumbing fixtures; sewage disposal. *Three hours, third term. M. W. F. 9-10.*

37. Water color painting: Work from models and still life. Conventional and sketch rendering of architectural subjects. Out-of-door sketching. Prerequisite course: Arch. 25. *Four hours, entire session. S. 9-1.*

38. Working drawings: Under such limitations as a client would be likely to impose, working drawings, details of construction, specifications and estimates are prepared for a building designed in course 39. *Twelve hours, lectures and drafting, second and third terms. T. Th. 2-4, S. 9-1.*

39. Architectural design: Continuation of problems in design, composition and planning. The planning of domestic buildings. Prerequisite course: Arch. 29. *Twelve hours, library research and drafting, first and second terms. M. W. F. 2-5, T. Th. 2-4.*

SENIOR CLASS.

42. History of painting: A brief survey of the development of painting with special reference to mural work. Lectures and assigned readings. *One hour, first term. W. 8-9.*

43. History of sculpture: An outline study of the development of sculpture and its relation to architectural design. Lectures and assigned readings. *One hour, second term. W. 8-9.*

44. Professional practice: Relations of the architect, owner and contractor; professional ethics; contracts and laws of business; office methods and other matters of practical value. Lectures, with assigned readings, reports and discussions. *One hour, third term. W. 8-9.*

46. Life class: Figure work from life, in color or black and white. Out-of-door sketching. Prerequisite course, except for special students: Arch. 37. *Six hours, first and second terms. T. Th. 10-1.*

47. Clay modelling: Work from architectural casts and from sketches. Prerequisite course: Arch. 32. *Six hours, third term. T. Th. 10-1.*

48. Architectural design: For architectural engineers. Advanced problems in design, composition and planning, followed by the preparation of working drawings, details of construction, specifications and estimates. During the third term a single major problem is studied and worked up as a thesis. Prerequisite course: Arch. 29. *Sixteen hours, library research and drafting, entire session. T. Th. 11-1 and 2-4, S. 9-1.*

49. Architectural design: For architects. Advanced problems in design, composition and planning. During the third term a single major problem is studied and worked up in detail as a thesis. Prerequisite course, except for special students: Arch. 39. *Twenty-four hours, library research and drafting, entire session. M. W. F. 2-5, T. Th. 2-4, S. 9-1.*

COLLEGE OF AGRICULTURAL SCIENCES

CHEMISTRY.

PROFESSOR ROSS.

PROFESSOR HARE.

PROFESSOR BRAGG.

ASSISTANT PROFESSOR POWELL.

INSTRUCTOR MARTIN.

ASSISTANT GENTRY.

Instruction in this department embraces the following courses of lectures, systematic laboratory work being given in connection with each course for the practice of chemical analysis and chemical research:

FRESHMAN CLASS.

101. Course in general chemistry: This consists of a series of lectures including a discussion of the fundamental principles in chemical philosophy in connection with the history, preparation, properties, and compounds of the metallic and non-metallic elements, with the main facts and principles of organic chemistry. In this course the more common applications of chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and approved improvements necessary for presenting the subject in the most attractive and instructive form. *Four hours, entire session. M. W. F. 8-9, T. 12-1.*

REFERENCE BOOKS.

McPherson and Henderson's General Chemistry, Newth, Holleman, Smith, Mellor, Chemical Journals.

SOPHOMORE CLASS.

103 (b). Organic chemistry: This course, though somewhat more condensed, is similar to 103 (a), with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins with reference to their functions in the life processes of plants and animals. *Three hours, first and second terms. M. W. F. 8-9.*

105. Agricultural chemistry: This course consists of lectures on chemistry in its application to agriculture and includes a thorough discussion of the origin, composition, and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical prin-

ciples involved in the rotation of crops, the feeding of live stock, and the various operations carried on by the intelligent and successful agriculturist. *Four hours, third term. M. T. W. F. 8-9.*

REFERENCE BOOKS.

Snyder's Soils and Fertilizers, Snyder's Chemistry of Plant and Animal Life, Johnson's How Crops Grow, and How Crops Feed, Lupton's Elementary Principles of Scientific Agriculture, Johnson and Cameron's Elements of Agricultural Chemistry, Stoddard's Agricultural Chemistry, Storer's Agriculture in Relation to Chemistry, scientific journals, reports of the United States Department of Agriculture, and the bulletins and reports of the various home and foreign agricultural departments and stations.

JUNIOR CLASS.

102. Industrial chemistry: Lectures, including discussion in detail of the processes and chemical principles involved in the most important applications of chemistry, in the arts and manufactures, to the preparation of materials for food and drink, for clothing, shelter, illumination, cleansing, purifying, writing, printing, etc. These lectures are amply illustrated by means of suitable specimens of raw materials and manufactured products, together with models and diagrams. *Three hours, first and second terms. M. W. F. 10-11. Four hours, third term. M. W. F. Th. 10-11.*

REFERENCE BOOKS.

Thorp's Industrial Chemistry, Wagner's Chemical Technology, Muspratt's Chemistry as applied to Arts and Manufacturing, Ure's Dictionary, Watt's Dictionary, Sadtler's Industrial Organic Chemistry, Blount and Bloxom's Chemistry for Engineers and Manufacturers.

103 (a). Course in organic chemistry: Instruction in this subject embraces lectures and recitations upon the leading facts and principles of the chemistry of the carbon compounds, and includes a study of the method of preparation of the more important compounds, their properties, and their structural and stereo-chemical relations. *Three hours, first and second terms; Two hours, third term. T. Th. 9-10.*

TEXT AND REFERENCE BOOKS.

Remsen's Organic Chemistry, Richter's Organic Chemistry, Gatterman's Practical Methods of Organic Chemistry.

SENIOR CLASS.

104. Course in Metallurgy: This consists of lectures and recitations upon the more important metals, such as iron and

steel, copper, lead, tin, silver, gold, mercury, zinc, etc. It includes a discussion of the physical and chemical properties of the metals and their alloys, the ores and their treatment, and the processes by which the metals are obtained from the ores, with chemical reactions involved. *Three hours, first term, M. W. F. 10-11; second term, M. W. F. 8-9.*

104b. Metallurgy: An advanced course in iron and steel. Lectures and recitations upon the special methods of manufacturing iron and its several alloys, or steels. Required of seniors in mining engineering, chemical engineering, chemistry and metallurgy, and mechanical engineering. *Three hours, third term. M. W. F. 10-11.*

106. Engineering chemistry: A course given during the senior year, special attention being devoted to the study of the construction and equipment of the chemical plants devoted to the manufacture of the more important chemical products. Excursions to various chemical and metallurgical plants during the course of the year will aid in familiarizing the student with the practical details of the operation of the leading industries. *Two hours, second and third terms. M. F. 12-1.*

107. Course in theoretical chemistry: The more modern phases of chemical theory are given special attention. *Two hours, first term. M. F. 12-1.*

108. Course in physical chemistry: Lectures and recitations. *Two hours, entire session. T. Th. 11-12.*

109. Methods of teaching chemistry in the secondary schools: In this course, students who have had the necessary preliminary work in chemistry will be afforded the opportunity of taking laboratory practice in experimental chemistry for lecture purposes and for the purpose of the practical study of methods of handling classes in experimental laboratory work. Advanced students can also take the course in the history of chemistry which is provided in the senior year of the course of chemistry and metallurgy. *Hours to be arranged.*

111. Course in advanced inorganic chemistry: *Two hours per week, entire session. M. W. 9-10.*

LABORATORIES.

110. Courses of practical work in the laboratory are carried on in connection with all courses of lectures.

The laboratories, which are open from 9 A. M. to 5 P. M. during six days in the week are amply supplied with everything necessary for instruction in chemical manipulation in qualitative and quantitative analysis, and in the methods of prosecuting chemical research. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the chemical laboratory is furnished with a work table, a set of re-agent bottles and the common re-agents and apparatus used in the qualitative and quantitative analysis.

At the close of the session he will be credited with such articles as may be returned in good order, the value of those which have been injured or destroyed will be deducted from his contingent fee.

SOPHOMORE CLASS.

(a) All students in the courses in agriculture, chemistry and metallurgy, chemical engineering, and mining engineering are required to take practical laboratory work. Students in the course in pharmacy, upon application, may be allowed to take this work. The work of this course embraces the preparation of a number of non-metallic elements, and some of the more important inorganic compounds, the identification of metals by means of the blowpipe, and the qualitative separation and detection of the bases and acids. *Six hours, entire session. First section, M. 11-1, Th. 8-10, F. 9:30-11:30; second section, M. W. F. 2-4.*

JUNIOR CLASS.

110 (b). A course in quantitative analysis, embracing gravimetric and volumetric analysis, and including the analysis of limestones, iron ores, etc. *Six hours, entire session. M. W. F. 2-4.*

SENIOR CLASS.

(c). A course in quantitative analysis, including analysis of fertilizers, soils, coals, ores, iron and steel, sugars and sugar products, feed stuffs, mineral waters, fluxes, slags, cinders, furnace gases, etc. The nature of the work is varied somewhat to suit the individual object of the student. *Six hours, entire session. M. W. F. 2-4.*

(d). The laboratory course provided for students in the course in mining engineering embraces work in quantitative analysis, including assaying. In the latter portion of the course, special attention is given to metallurgical analysis and the fire assay of ores of gold, silver, and other important metals. *Six hours, entire session. M. W. F. 2-4.*

(e). In the courses in pharmacy and veterinary science, instruction in urine analysis and in toxicology and toxical analysis is given during the last term. *Six hours. M. W. F. 2-4.*

(f). In the senior year, a laboratory course in organic chemistry is provided for students in the course in chemical

engineering throughout the entire year, and for students in the course in chemistry and metallurgy during the third term. *Four hours, entire session. T. Th. 2-4.*

The short course includes systematic laboratory work in organic preparations, while the longer course embraces work in organic analysis, as well as in preparations.

112. In addition to the laboratory work above described, it is designed to give a short course of laboratory work in industrial chemistry, in which the student will apply upon a small scale the principles involved in the processes of some of the more important chemical industries.

Students completing the above courses are afforded ample facilities for advanced work along special lines.

AGRONOMY.

PROFESSOR DUGGAR.

PROFESSOR FUNCHES.

The regular agricultural course extends through four years, and is intended to prepare those who complete it to become successful farmers, farm superintendents, and agricultural scientists in the various divisions of agricultural work in the U. S. Department of Agriculture, and the numerous agricultural colleges and experimental stations. The studies in the regular agricultural courses are so arranged that a student may obtain a thorough education while acquiring the technical training necessary to the most successful management of farming operations and of agricultural investigation or teaching. No foreign language is required for graduation in this course, but those who expect to engage in scientific work of the U. S. Department of Agriculture or of the agricultural colleges and experiment stations, have the opportunity to study Latin, French and German, or any one or two of these.

For the benefit of those who are unable to spend four years at college, and who desire to prepare for the management of a farm, a short two-year course in agriculture is provided. In this the student devotes his entire time to those studies having a direct bearing on his future occupation.

The following courses of instruction are offered:

SOPHOMORE CLASS.

202. Corn: Lectures, recitations, and field practice on the cultivation, judging and improvement of corn. The student assists in harvesting certain experiments, becomes acquainted with a number of the best varieties, learns to select the best ears and the best plants, and notes the results of experiments

in improving or breeding corn. *Two hours, lectures; two hours, laboratory, first term. T. Th. 11-12, W. 2-4.*

203. Farm accounts: *Lectures and Practice, two hours, second term.*

204. The small grains: Lectures, recitations, and field practice on wheat, oats, rye and barley. These plants are treated both as grain crops and as forage plants. *Two hours, lectures; two hours, laboratory, third term. T. Th. 11-12, W. 2-4.*

JUNIOR CLASS.

205. Leguminous forage plants and soil improvement: Lectures, recitations, and field practice on this most important group of forage plants, including cowpeas, soybeans, alfalfa, the clovers, vetches, etc. These plants are treated both with reference to their use as forage plants and as a means of improving the soil. *Two hours, lectures, two hours, laboratory, third term. W. F. 10-11, T. 2-4.*

SENIOR CLASS.

206. Cotton. Lectures, recitations, and field practice in identifying and comparing a large number of varieties growing on the experiment station farm; judging individual cotton plants, and lectures on the cultivation, fertilization, and improvement of cotton. The collection of varieties growing on experiment station farm usually numbers between fifty and one hundred varieties, and all of these are available for students' use. *Two hours, lectures, two hours, laboratory, first term. T. Th. 12-1, S. 9-11.*

207. Cotton classing: This course of laboratory work consists of practice in classing the commercial grades of cotton by comparing great numbers of samples procured from the offices of cotton buyers, with a nearly complete set of type samples owned by this department. A part of this practice will be under the supervision of experienced cotton buyers. *Hours by appointment.*

207a. Special crops: A course of lectures dealing with sugar cane, tobacco, rice, broom-corn, and other southern crops not treated in other courses. *Two hours, second term. T. Th. 12-1.*

208. Farm management: A course of lectures and practice dealing largely with rotation of crops, cost of producing different crops, systems of farming, selection of a farm, and plans for the best use of the farm or soil in which each student is most interested. This course is intended to give the student an opportunity to bring to bear on practical problems the information acquired from preceding courses of instructions.

in agriculture and related subjects. *Two hours, lectures; two hours, laboratory, third term. T. Th. 12-1, S. 9-11.*

209. Investigation as a basis for a thesis: After a month spent in special reading under the direction of the professor of agronomy with a view to the selection of a subject for a thesis, the student will perform some agricultural experiment in crop production, soil treatment, or in testing farm machinery. Suitable facilities for such thesis work are provided in the fields and agricultural laboratories. In addition to conducting an original experiment, the student will review the literature of agriculture to ascertain the results of similar or related experiments. It is expected that the results of some of these experiments will be worthy of publication. *Entire session.*

211. Soils and soils laboratory: Recitations intended to acquaint the student with the physical properties of soils, with the principal soils of Alabama, and especially those of the region from which each student comes. Instruction in this course will be given with a view to fitting a student to engage in the soil survey work of the U. S. Department of Agriculture, as well as to prepare him for the rational management of the soil of the farm. *Five hours, entire session. T. Th. 9-10, Th. 2-5.*

212. Methods of teaching agriculture: This is a course of lectures and laboratory and field exercises intended to meet the needs of those who expect to teach agriculture or nature study in the common schools and agriculture in the high schools. Special attention is given to the selection of material for illustrating the principles of agriculture, and practice will be given in conducting a number of simple demonstrations. Frequent excursions are made in the fields. *Two hours, third term.*

Post graduate courses in crop production, soils, and farm management are offered. The exact nature of the subject will depend upon the special requirements of the student.

Students taking a four-year course in agriculture receive instruction in various branches of animal husbandry and horticulture, as well as in the natural sciences bearing on agriculture.

COURSES FOR SPECIAL STUDENTS.

213. Soils and fertilizers: (For special students only)—This is a lecture course in which the student is made familiar with the origin, chemical and physical properties, and management of the soil. A discussion of the relation of rotations, fertilizers, and lime to the maintenance of soil fertility is given. *Two hours, first and second terms. Tu. Th. 8-9.*

214. Terracing and Drainage: (For special students only)—Field instruction is given in this course with the view of fitting the student to lay off terraces and design drainage systems on the farm. *Two hours, second term. F. 10-12.*

AGRICULTURAL ENGINEERING.

PROFESSOR _____

ASSISTANT PARKER,

JUNIOR CLASS.

520. Drainage, terracing, and farm structures: While these topics are the subjects of lectures and recitations, chief stress is laid on giving the student practice in locating terraces, laying out ditches and planning systems of tile drainage. Such time as is available is given to the study and planning of barns, fences, gates, etc. *Two hours lectures, two hours laboratory, first term.*

SENIOR CLASS.

521. Farm engines: This course consists of lectures and laboratory practice with farm engines; application of power to farm operations, such as feed grinding, silage cutting, pumping, spraying, wood saws, etc.; transmission of power, including belt lacing, rope splicing, etc. Especial attention is given to finding and remedying engine troubles. *Two hours, second term.*

522. Farm machinery: It is the aim of this course to acquaint the student with improved farm machinery; adjustment, construction, repair, and operation of preparation machinery, seeding machinery, cultivators, haying machinery, etc. *Two hours, second term.*

BOTANY.

PROFESSOR GARDNER.

ASSOCIATE PROFESSOR MASSEY.

ASSISTANT BURLESON.

ASSISTANT M'CALL.

The courses offered by the Department of Botany are designed to meet the needs of three different groups of students: Those desiring to secure some general acquaintance with the elementary facts and principles of biological science as a necessary part of a cultural education, those desiring a thorough and detailed presentation of certain aspects of the subjects as a prerequisite to entrance upon the study of medicine or of some phase of applied botany, such as horticulture or agronomy, those seeking the fullest possible collegiate training in the

subject as a preparation for teaching or for advanced work in the subject. For information as to laboratory equipment see page 19.

SOPHOMORE CLASS.

301. General botany: This course is planned to meet the needs of all three classes of students just named. It is designed to furnish a broad general introduction to the fundamental principles of biological science, supplying the foundation upon which subsequent courses are built while at the same time giving to the non-specialist a good acquaintance with those biological principles which should form a part of his equipment for life. The course is not rigidly morphological, but attempts to supply an introduction to the evolutionary history, the fundamental physiological processes, the life relations and classification of plants. Required of all sophomores in the college of agriculture and two-year pharmacy specials. A laboratory fee of \$3.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures, and four hours laboratory, entire session.*

302. Poisonous and medicinal plants: The object of this course is to train students in the classification and recognition of poisonous and medicinal plants. The students will be taught to recognize medicinal plants in the field as well as in the laboratory. The department herbarium will be used freely to illustrate important poisonous plants. The lectures will deal with the families represented by important poisonous and medicinal plants. Required of sophomores in veterinary and pharmacy and of two-year pharmacy specials. *Two hours lectures, and four hours laboratory, third term.*

JUNIOR CLASS.

303. Agricultural bacteriology: This course is designed to supply to students contemplating specialization in animal husbandry or in some phase of applied botany, as horticulture, forestry, or agronomy, such an introduction to the principles of bacteriology as may furnish a basis for study of the special problems to be encountered in these lines of work. After a brief introductory discussion of the general morphology and physiology of the bacteria, the biological relations of the specialized groups will be taken up. The bacteriology of fermentation and putrefaction, the nitrogen-fixing and sulphur bacteria, the application of bacterially produced processes in the industries, and the more important problems of soil bacteriology will be dealt with in such details as time permits. The point of view throughout the course is distinctly economic. The forms pathogenic for man and animals will not be considered. A prerequisite for this course is Agr. 301. A labora-

tory fee of \$2.00 is charged in this course to cover the cost of materials and laboratory sheets. *Two hours lectures, four hours laboratory, first term. M. W. 9-10, 11-1.*

304. Plant physiology: This course deals with the fundamental processes involved in plant response and plant behavior as related to crop production. The topics covered in the lectures and laboratory are the following: The cell as the physiological unit; the principles of absorption; rise of sap and transpiration; water requirements of economic plants; mineral nutrition; the carbon relations of plants; the relations to nitrogen; the products of metabolism; digestion and translocation; respiration; aeration and fermentation; growth, reproduction; the relation of plants to temperature, light and toxic agents; variation and heredity. A prerequisite for this course is Agr. 301. A laboratory fee of \$3.00 is charged in this course to cover the cost of materials and laboratory outlines. *Two hours lectures, four hours laboratory, second and third terms. M. W. 9-10, 11-1.*

307. Range and pasture plants: A study of the poisonous and forage plants of pasture and range. The object of this course is to familiarize the student with the important plants of this region which are beneficial or injurious to horses, cattle, hogs and sheep. Growth, habits, general aspects, distribution and ecological relations will also receive consideration. Required of juniors specializing in Animal husbandry, and juniors in Veterinary Medicine. *One hour lectures, four hours laboratory or field work, first term.*

SENIOR CLASS.

305. Plant pathology: In the fall term, pathological technique, the nature, processes, relationships and classification of fungi in general and disease producing fungi in particular will be studied. Such topics as saprophytism, symbiosis, parasitism and mycorrhiza will receive consideration. A collection of fungi will be required. The winter and spring terms will be devoted to a detailed study of plant diseases, their causes, effects and remedies. Students will be expected to become familiar with the literature of plant pathology and to make reports on assigned topics. They will be taught to recognize plant diseases *in the field*, and to estimate the amount of damage. Prerequisites for this course are Agr. 301, 303, and 304. A laboratory fee of \$3.00 is charged to cover cost of materials and laboratory sheets. *One hour lecture, four hours laboratory, entire session.*

306. Plant histology: A short one-term course intended to familiarize the students with histological technique as a foundation for advanced work in botany, and for those who wish

to teach botany. Prerequisite is Agr. 301. *Two hours lectures, four hours laboratory, second and third terms.*

308. Advanced plant physiology: The first part of this course deals with a more detailed study of some of the phases of plant physiology for which there is not sufficient time in course 304. The second part of the course deals with the chemical recognition and qualitative estimation of the principal groups of food materials, carbohydrates, fats and proteins, and furnishes an introduction to the methods and technique of physiological chemistry as applied to studies in plant physiology. The third part of this course consists of micro-chemical study and recognition of the organic and inorganic constituents of plants. *Two hours lectures and four hours laboratory throughout the year.*

GRADUATE WORK.

The department offers to properly prepared students opportunity for advanced work in botany, particularly in plant physiology and pathology. Students planning to do graduate work should consult with the head of the department as early in the course as possible, preferably at the beginning of the junior year, in order that the proper choice of the electives may be made. The general requirements for graduate work in the department are: the satisfactory completion of the undergraduate courses in botany, together with the required courses in organic and agricultural chemistry, courses in plant breeding and forestry (Horticulture 609 and 608), and a fair reading knowledge of German and French. By special arrangements with the department head, a student may begin graduate work without having fully met these requirements, with the understanding that they are to be fully met prior to serious entrance upon his work in this department, and in addition to the work in botany required for the Master's degree.

TEXT AND REFERENCE BOOKS.

Gager's Fundamentals of Botany; Ganong's Textbook of Botany; Coulter's Plant Structures; Robbins' Botany of Crop Plants; Gray's School and Field Botany; Kraemer's Botany and Pharmacognosy; Duggar's Plant Physiology; Coulter, Barnes and Cowles' Textbook of Botany; Jost's Plant Physiology; Marshall's Microbiology; Conn's Agricultural Bacteriology; Haas and Hill's Chemistry of Plant Products; Duggar's Fungous Diseases of Plants; Stevens' Fungi which Cause Plant Diseases; Hesler and Whetzel's Manual of Fruit Diseases.

HORTICULTURE.

PROFESSOR STARCHER.

ASSOCIATE PROFESSOR PRICE.

LABORATORY ASSISTANT ISBELL.

Instruction in this subject begins with the third term of the sophomore year and continues through the junior and senior years for students taking a regular four-year course in agriculture. A special two-year course in horticulture and related subjects is open to students who are unable to take the regular four-year course.

Practical exercises in the laboratory and field supplement the lectures and recitations. Constant attention is given to the fundamental principles and science upon which the best in practical methods is based.

SOPHOMORE CLASS.

601. Principles of plant culture: This includes the study of germination, propagation, transplanting, conditions of plant growth, etc.; also seed testing, preparation and sowing of seed beds. *Recitations, two hours, third term. W. 11-12, Th. 10-11.*

Plant propagation: (to accompany 601): Laboratory practice in seed testing, propagation of plants, pruning, etc. Students are required to submit illustrated notes. *Laboratory and field, four hours, third term. M. Th. 2-4.*

Text-books: Principles of Plant Culture (Goff), and The Nursery Book (Bailey).

JUNIOR CLASS.

602. Landscape gardening: An introduction to the general subject of landscape design. The trees, shrubs, vines, perennials, and annuals adapted to southern gardens are studied. Individual problems are presented for the embellishment of the home and school grounds, and plans for public squares and parks are studied. *Lectures, two hours, first term. Tu. Th. 10-11.*

Text-books: Landscape Gardening (Waugh). References Landscape Gardening (Maynard), Modern Civic Art (Robinson); The Landscape Beautiful (Waugh); Weidenmann and other authors.

603. Vegetable gardening: Studies of the principal truck and garden crops with notes as to their origin, classification and economic importance; methods of growing, fertilizing, harvesting, marketing, and storing these crops. *Recitations and lectures, two hours, laboratory, two hours, second and third terms; second term, Tu. F. 11-12, Th. 2-4; third term, Tu. F. 11-12, W. 2-4.*

Text and reference books: Garden Farming (Corbett), Vegetable Gardening (Bailey), Up-to-Date Truck Growing in the South (Davis), Vegetable Gardening (Vilmorin), Southern Gardener's Manual (Newman), Vegetable Gardening (Watts).

604. Orchard technique: A laboratory course in spraying, pruning, fertilization, cultivation, and orchard management, supplementing course 603. *Two hours, second term. Tu. 2-4.*

References: The Pruning Book (Bailey), Farm and Garden Rule Book (Bailey).

SENIOR CLASS.

605. Fruit growing: A study of the more important fruits and nuts of the United States, with special reference to their cultivation in home plantings and commercial orchards, harvesting, grading, packing, marketing, leading varieties for the several sections. *Recitations and lectures, three hours, laboratory, two hours, entire session. M. W. F. 9-10, laboratory F. 2-4.*

Text and reference books: Principles of Fruit Growing (Bailey) 20th revised edition. Fruit Harvesting, Storing and Marketing (Waugh), Citrus Fruits (Coit), The Pecan (Hume), Citrus Fruits and Their Culture (Hume), Systematic Pomology (Budd and Hansen) and (Waugh), The American Fruit Culturist (Thomas).

606. Canning: Studies in the canning of the different fruits and vegetables. *Lecture one hour, laboratory two hours, first term. Tu. 8-9 and 2-4.*

607. Floriculture: This course briefly covers the subject of greenhouse construction and management, with special reference to growing of the leading vegetables and decorative plants with discussions on the forcing and marketing of vegetables and cut flowers. *Lecture one hour, laboratory, two hours, second term. Tu. 8-9 and 2-4.*

608. Forestry: An elementary course, embracing a study of the forest conditions in Alabama, care of woodlots, preservation of wood, and the uses of the different southern woods. *Recitations and lectures, three hours; laboratory and field exercises two hours, second term. Tu. Th. 10-11; W. 12-1; laboratory M. 2-4.*

Text-books: Elements of Forestry (Moon and Brown), First Book of Forestry (Roth), Practical Arboriculture (Brown), Primer of Forestry (U. S. D. A.), Principles of Handling Woodlands (Graves), Economics of Forestry (Fernow), Principles of American Forestry (Green), Shade Trees in Towns and Cities (Solotaroff).

609. Plant breeding: A study of the improvement of plants, theories and laws of plant breeding, the origin of the choice

varieties of garden and farm crops. *Lectures and recitations two hours, third term. Tu. and F. 8-9.*

Text and reference books: Principles of Plant Breeding (Gilbert and Bailey), Plant Breeding (Davenport), The Mutation Theory, Species and Varieties (DeVries).

610. Thesis: Students who expect to make their major work in horticulture are required to select a thesis subject not later than October 1st.

ENTOMOLOGY AND ZOOLOGY.

PROFESSOR HINDS.

ASSOCIATE PROFESSOR BUCK.

SOPHOMORE CLASS.

701. Zoology: A general course in zoology is required of all sophomore students in agriculture. The course is given in the first and second terms, and includes brief discussion of the relation of animals to plants and minerals, the nature of cells, the functions involved in life processes and of the classification and distribution of animals. The different animal groups are studied, beginning with the single celled animals, and leading gradually to the most complex forms. *Lectures, two hours; laboratory four hours, first and second terms. T. W. F. 8-9; W. Th. or F. 2-4.*

Text: Hegner's College Zoology. A laboratory fee of \$1.00 is charged to pay the cost of material and laboratory sheets.

SENIOR CLASS.

702. Entomology: In accordance with the catalogue requirements the work in Entomology is taken by all senior students electing an agricultural group of courses, and by the special two-year agricultural students during their second year. In addition to this senior work, the subject is open to post-graduate students, who have completed the senior course satisfactorily, as an elective course leading to the degree of Master of Science. The senior work is given during the fall and spring terms only, while the post-graduate work continues during the college year.

The senior courses are designed to familiarize the students who anticipate engaging in agricultural work with the most important general facts of entomology, including studies on the structure of insects as applied to their identification; a systematic examination of the different groups, and of the most common insect pests of each group, with methods for their control.

703. A series of lectures on bees and beekeeping is given, and demonstration of modern methods in manipulation of bees is afforded by the college apiary.

Other topics considered are:

The chemistry, preparation and application of insecticides, their merits and defects; tests for detecting adulterations; comparative tests of nozzles and other apparatus. The importance of improved methods of agricultural practice is shown and their effectiveness as controlling factors for insect pests is explained.

Methods in the collection, mounting and preservation of insect specimens are also studied, the student being required to make a systematic collection in the fall and in the spring an economic collection of the pests most closely related to the future occupation of the student. A laboratory fee of \$1.00 is charged for material. *Lectures, three hours; laboratory two hours, first and third terms. T. Th. 10-11, W. 12-1, M. 2-4.*

ANIMAL HUSBANDRY.

PROFESSOR TEMPLETON.

INSTRUCTOR MONTAGUE.

Instruction in this department is given in the class room, in the laboratories and upon the animal husbandry farm with the live stock. While lectures are given on judging animals, the instruction does not stop with the lectures; the students are taken to the barn and feed lots where the animals are placed before them and each student is required to make a written report concerning the animals. Class-room work in dairy instruction is supplemented, strengthened, and made practical by requiring each student to work in the dairy laboratory where butter is made, where Babcock test is used, where the lactic acid in cream is determined, etc. In the senior year, trips are made to cities, state and county fairs, and farms to study live stock judging and management. The live-stock provided by the college for the students' use in studying breeds and judging consist of pure bred herds of Angus, Hereford, Shorthorn and Jersey cattle; Duroc-Jersey, Poland China and Berkshire swine. Percherons, light horses and mules are available for class work.

The department now has the complete herd books of practically all of the leading breeds of live stock in America. By the use of these the student is enabled to inform himself in regard to all pedigrees and to study the different scales of points which the breeders have adopted to represent the highest types of the various breeds. All class room instruction is

given by means of text-books and lectures. Many of the lectures are illustrated by the use of a balopticon.

The courses in this department may be grouped under five main heads:

(1) Judging of live stock; (2) breeding of live stock; (3) feeding of live stock; (4) management of live stock; (5) dairying.

The student is given an opportunity to specialize in animal husbandry throughout the junior and senior years. The courses are as follows:

SOPHOMORE CLASS.

802. Judging beef cattle: The object of this course is to make the student familiar with the various classes and grades of cattle recognized by the leading stock markets, and to familiarize him with the leading beef breeds. Instruction is given by lectures, the use of the score card, and by comparative judging. *Laboratory, two hours, first term. M. 2-4.*

803. Judging dairy cattle: The student is familiarized with the dairy types and breeds, and is given judging instruction by the employment of the same methods as used in beef cattle judging (802). *Laboratory, four hours, second term. M. 2-4, W. 2-4.*

JUNIOR CLASS.

804. Dairying: The study of the secretion, character, composition, and production of milk, is made; proper methods of handling milk and cream for consumption, pasteurizing, sterilizing. The students are given thorough work in using the Babcock test and the lactometer, and the lactic acid test, together with the ordinary tests for the purity of milk and its adulterants. They are also drilled on all the phases of butter-making and standardizing milk and cream. Familiarity with the construction, care and operation of the leading makes of cream separators, and other dairy equipment, is required. *Lectures, two hours; laboratory, two hours, first term. Tu. Th. 9-10; W. Th. 2-4.*

805. Swine judging: Considerable time is given to the study of the market classes of grades and the leading breeds of lard and bacon types of hogs adapted to southern conditions. The lecture work is followed by the students using the score card and doing comparative judging. *Laboratory, four hours, second term. W. 2-4, Th. 11-1.*

806. Sheep judging: The student is instructed in the methods of judging sheep, considering the market classes and grades, and the characteristics of the principal breeds. *Laboratory, two hours, third term. Th. 2-4.*

806 (a). Advanced stock judging: This course is for junior agricultural students who are especially interested in live-stock judging, and is a prerequisite to making the intercollegiate stock judging team. No college credit is given. *Hours to be arranged, latter half second term and the third term and first half following fall term.*

SENIOR CLASS.

807. Principles of animal breeding: The lectures of this course will embrace the principles and practices involved in the improvement of the domestic animals. The subjects of reproduction, variation, selection, heredity, line breeding, in-breeding, cross breeding, grading-up, etc., will be discussed in their relations to practical breeding problems. *Lectures, two hours, first term. M. W. 8-9.*

808. Advanced feeding: This course consists of lectures, supplemented by reference reading, upon the most profitable methods of producing, finishing and marketing, pork, beef, and mutton. The various concentrates and roughages are discussed as to their importance and efficiency as feeds for horses, mules and dairy cattle. *Lectures, three hours, entire session. M. W. F. 10-11.*

809. Meats: This consists of a study of the structure and composition of meats, quantity, cost and food value of the various cuts of beef, mutton, and pork; exercise is also given in judging the carcasses of the different classes of animals. A study is made of how the home-dressing and home-curing of pork is carried on. Lectures are given upon the effect of feeding and breeding of the different animals as affecting the value of the carcass and the quality of the meat. *Laboratory two hours, second term. F. 2-4.*

810. Poultry: In this course an effort is made to acquaint the student with the different types of poultry with relation to their use and value on the farm. Instruction is given also in feeding, managing, housing, and judging poultry. *Lectures, two hours, third term. M. W. 8-9.*

811. Judging horses and mules: Lectures and laboratory work are given in the judging of the various classes of horses and mules which are adapted to Alabama conditions. *Laboratory, two hours, second term. M. 2-4.*

812. Live stock management: The raising of horses, cattle, sheep, and swine as a business, is discussed in full detail, featuring the care and management in production and marketing. A study is made of the methods used by the most successful stock farmers. Practical work is given in preparing stock for shows and sales. This course will be limited to, and

required of students majoring in animal husbandry. *Lectures, one hour; laboratory, two hours, entire session, Th. 8-9; Tu. 2-4.*

813. Herd book study: This includes a study of the various herd books with the view of becoming familiar with the pedigrees of the leading strains and families of the different breeds of livestock. Emphasis is made on the methods and rules of registration for each of the breeds of livestock. The rules and regulations governing the importations of livestock into the United States and into Alabama, together with the rules and regulations governing the moving of livestock within the United States and Alabama are studied. *Lectures, two hours, second term. M. W. 8-9.*

814. Dairying: This course is outlined to meet the requirements of the senior veterinary students and is similar to course 804. *Lectures, one hour; laboratory, two hours, second term. F. 11-1.*

SPECIAL TWO-YEAR COURSE IN AGRICULTURE.

FIRST YEAR.

815. Dairying: A separate course in this subject giving special attention and instruction for the benefit of the two-year students in agriculture, is maintained. The student is familiarized with the butter fat tests, the use of the lactometer, determination of the lactic acid in milk, churning, cream separation, etc. Practice is also given in determining the various common adulterants of milk. *Lectures, two hours; laboratory, four hours, first term. W. F. 8-9, Tu. Th. 2-4.*

816. Live stock feeding: This course is offered for the benefit of the first-year veterinary students, and the first-year special agricultural students. The food requirements of the animals' bodies are briefly considered. All through this course the practical, rather than the scientific side of feeding, is emphasized. Special reference is made to feeding horses and dairy cattle. Veterinary students are allowed to discontinue this subject at the middle of the second term. *Lectures, two hours, entire session. First term, Tu. 8-9, Th. 10-11; second and third terms, M. Th. 8-9.*

817. Live stock management: This course, also, is for the first-year veterinary students, and the first-year special agricultural students. It consists of a series of lectures on the care, housing, and management of horses, cattle, swine, and sheep. *Lectures and Laboratory, three hours, latter half of second and the third term. Tu. 10-11; W. 2-4.*

818. Dairy cattle judging: The second term is devoted to judging dairy cattle, in the place of the course in dairying. A detailed study of the several different breeds of dairy cattle

is made, and their chief distinctive characteristics pointed out. Exercises in practical judging are given by the use of the score card and by comparative judging at the barns. *Laboratory, four hours, second term. Tu. Th. 2-4.*

819. Judging beef cattle: In this course the student is familiarized with the leading breeds of beef cattle, and a study of the conformation of each type is made by practical judging. *Laboratory, two hours, third term. Tu. 2-4.*

SECOND YEAR.

820. Judging horses and mules: A special course of judging is maintained for the second year special students in agriculture. The various types of horses and mules and the market classes are studied. Representatives of the different classes are brought before the students who are, by detailed study, given an opportunity to become thoroughly familiar with each of them. *Laboratory, four hours, first term. M. W. 10-12.*

821. Poultry: This course in poultry consists of the study of the types and breeds; the housing, feeding and caring for all classes and ages. From time to time hours are spent in judging. *Lectures, two hours, first term. M. F. 12-1.*

822. Swine judging: This course is a continuation of the course of judging begun in the second year by the study of horses and mules. The leading breeds of swine are kept at the station barns, and the student has ample opportunity to become thoroughly familiar with each. The difference in function and conformation between the lard and bacon types, and the scrubs or natives, is pointed out. A study is made in practical judging by the use of the score card, and by comparative judging. *Laboratory, four hours, second term. M. W. 2-4.*

823. Meats: This course includes a study of the effects of various feeds on the meat and lard of hogs, and other animals; finishing stock for slaughter; slaughtering; dressing and curing of the meat. In the laboratory work the student is required to put into practice the methods taught. *Lecture, two hours; laboratory, two hours, second term. Tu. 9-10; F. 2-4.*

824. Principles of breeding: A course of study in the principles of breeding live stock, giving special attention to the problems of the practical breeder. Much attention is given to fecundity, inbreeding, cross-breeding, grading-up, and inheritance. Variation; its causes and benefits are studied. *Lectures, two hours, third term. Tu. 8-9; F. 12-1.*

825. Sheep judging: A course is given to make the student thoroughly familiar with the leading breeds of sheep, their conformation and uses. *Laboratory, two hours, third term. F. 10-12.*

SCHOOL AGRICULTURE.

JUNIOR AND HOME ECONOMICS EXTENSION.
DEPARTMENT.

L. N. DUNCAN.

J. C. FORD.

MARY FEMINEAR.

MARY E. KEOWN.

*MARJORIE PRICE CAMPER.

This department was created July 1, 1914, and is a part of the agricultural extension work conducted in Alabama by co-operation between the College and the United States Department of Agriculture.

The special lines of work in this department are as follows:

Organization of boys' corn clubs.

Organization of boys' pig clubs.

Organization of girls' canning clubs.

Home demonstration work for farm women.

Poultry clubs.

Movable schools of agriculture.

* In co-operation with the Alabama Girls' Technical Institute, Montevallo, Alabama.

DEPARTMENT OF PHARMACY.

PROFESSOR BLAKE.

The pharmacy department of this institution is a member in good standing of the American Conference of Pharmaceutical Faculties.

Three courses are offered—the two-year course leading to the degree *Graduate in Pharmacy*; the three-year course leading to the degree *Pharmaceutical Chemist*; and the four-year course leading to the degree *Bachelor of Science in Pharmacy*.

The practical work in pharmacy includes the manufacture of not less than two hundred pharmaceutical preparations and the compounding of not less than fifty prescriptions.

The work in pharmacognosy includes the study of more than 250 drugs, each of which the student is required to recognize by its physical and chemical properties, giving Latin name, common name, original habitat, constituents, medicinal action and dose.

FIRST YEAR.

401. (a). Pharmacy: Metrology; specific gravity; heat and applications of heat; fundamental operations of pharmacy; apparatus used in pharmaceutical processes, pharmaceutical arithmetic. *Three hours, first term. M. W. F. 8-9.*

(b). Pharmaceutical laboratory: Preparation of official and non-official galenicals, including the following classes of preparations: waters, spirits, liquors, mucilages, pills, elixirs, oleates, tinctures, etc. *Two hours, lectures, six hours laboratory, first and second terms. T. 10-11, Th. 12-1, Tu. Th. 2-4, S. 11-1.*

402. Pharmacognosy: The study of crude drugs; lectures, recitations, and practical work in identification. *Four hours, second and third terms. M. T. W. F. 11-12.*

406. Pharmaceutical chemistry: A study of the official salts, official title, chemical formula, reactions, description, physical identification, dosage, etc. *Three hours, second and third terms. M. W. F. 8-9.*

SECOND YEAR.

403 (a). Pharmaceutical technique and manufacturing pharmacy; official and non-official galenicals and chemical preparations; a thorough study of the U. S. P. and N. F. class work. *Three hours, entire session. M. W. F. 12-1.*

(b). Manufacture of more difficult galenicals and U. S. P. chemical preparations. *Twelve hours, first term. T. Th. 2-6, S. 8-12.*

(c). Alkaloidal assay. *Nine hours, second term. T. Th. 2-4, S. 8-1.*

(d). The compounding of fifty or more prescriptions and individual instruction. *Four hours, third term. T. Th. 2-4.*

(e). Pharmaceutical testing and drug analysis. *Five hours, third term. S. 8-1.*

404. Pharmacognosy: The study of crude drugs. This course is a continuation of course 402. *Three hours, first term. T. Th. 10-11, W. 9-10.*

405. Prescription reading and incompatibilities: Lectures and recitations. *Three hours, second and third terms. T. Th. 10-11, W. 9-10.*

407. United States Pharmacopoeia: This course is primarily a review intended to prepare the student to stand the State examinations. It covers all crude drugs, organic and inorganic chemicals and preparations found in the U. S. P. *Three hours, second and third terms. M. Th. F. 9-10.*

THIRD YEAR.

408 (a). Food and Drug Analysis: A study of the composition and method of analysis of leading food products, such as vinegars, fats and oils, dairy products, canned fruits and vegetables, alcoholic liquors, candies, preservatives, etc.

Drug analysis includes the chemical and microscopical examination of drug products that are especially liable to adulteration. *Twelve hours, first term. T. Th. 2-6, S. 8-12.*

408 (b). Organic Chemical Laboratory: The manufacture of not less than 35 organic chemicals. *Twelve hours, second and third terms. T. Th. 2-6, S. 8-12.*

TEXT AND REFERENCE BOOKS.

Army's Principles of Pharmacy; Steven's Pharmacy and Dispensing, Kraemer's Botany and Pharmacognosy, Caspari's Treatise on Pharmacy; Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacognosy, Scoville's The Art of Compounding, Beal's Prescription Practice, Dorland's Pocket Medical Dictionary, Ruddiman's Incompatibilities in Prescriptions, O'Connor's Commercial Pharmacy, Lyon's Pharmaceutical Assaying, United States Pharmacopoeia, United States Dispensatory, National Dispensatory, Prescott's Organic Analysis, Allen's Commercial Organic Analysis, Pharmaceutical Journals, Reports of American Pharmaceutical Association, Holland's Materia Medica and Toxicology.

SCHOOL OF AGRICULTURAL EDUCATION

PROFESSOR JUDD, Director

PROFESSOR BLASINGAME

PROFESSOR (to be selected)

PROFESSOR CRENSHAW

PROFESSOR FULLAN

PROFESSOR RUTLAND

PROFESSOR TEMPLETON

PROFESSOR PRICE.

The Department of Education was established in 1915 to meet an increasing general demand for teachers, principals, supervisors, and superintendents for the schools of Alabama. During the three-year period that has followed a large proportion of the total of the registrations have been from the College of Agriculture. This result is due in part to the fact that agriculture constitutes the major interest of the State, and to the further fact that for no other occupation, engaging large numbers of people, has so definite and extensive educational facilities been provided in our public schools. This provision for agricultural instruction has created a demand for teachers of Agriculture, and consequently for the training of teachers of Agriculture.

VOCATIONAL AGRICULTURE.

The need of trained Agricultural Teachers has been emphasized by the enactment by the National Congress of the Smith-Hughes Bill providing for the instruction of Vocational Agriculture. By reason of the insight gained during these first three years of the Department, and because of the new conditions developed by the Federal statute, it has seemed wise to place the chief emphasis upon the training of teachers for Vocational Agriculture, and to make liberal provision for the same.

SCHOOL OF AGRICULTURAL EDUCATION.

The Department of Education organized to meet a general demand for the training of teachers, has, in consequence, been reorganized into a School of Agricultural Education, with a four-year curriculum. Provision is made in the senior year for specialization in the field of major interest. Upon the completion of the course there is granted the degree of Bachelor of Science in Agricultural Education.

REQUIREMENTS FOR DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION.

The requirements for the degree of Bachelor of Science in Agricultural Education are the same in general as for the Bache-

lor's degree in the other departments of the Institute. The curriculum of the Agricultural College, consisting of 176 half-year hours, with certain modifications, furnishes the basal subjects for the degree of Bachelor of Science in Agricultural Education. For certain of these subjects, 24 half-year hours in Education are required. The work of the senior year is largely elective. The electives are chosen from the curricula of the College of Agriculture and of the School of Education, with the advice and approval of the Director of the School of Education and the Dean of the College of Agriculture.

STATE TEACHER'S CERTIFICATE.

Students who graduate from the course in Agricultural Education will receive the degree of Bachelor of Science in Agricultural Education, and will be entitled to receive, upon payment of fee, a first grade State Teacher's Certificate, good for a period of five years and renewable for life.

DEMAND FOR TEACHERS.

The demand upon the College for teachers of Vocational Agriculture and the related sciences has been far greater than it could supply. Salaries are far more liberal than in the general field of teaching. Positions paying from \$1,500 to \$2,500 are not uncommon.

COURSES OF INSTRUCTION.

Below are listed the subjects of study in EDUCATION, and, in addition, certain other subjects which have been instituted to meet the special requirements of students in Vocational Agriculture and for the degree of Bachelor of Science in Agricultural Education.

Under the head of *Courses of Instruction, School of Agricultural Education*, p. 57, of this catalogue, will be found an arrangement of the required courses of study by years and by terms. Some option, however, may be exercised as to the year in which the courses in Education may be taken. Courses in Education not required are open to seniors as electives, provided the total number of half-year hours in Education, required and elective, shall not exceed 30.

1. Elementary Psychology
An elementary course prerequisite to the later courses in Agricultural Education, two hours the session, four credits. Required.
2. Vocational Psychology
A consideration of the questions of vocational guidance, management, and control of the human factor in vocational processes. Two hours, first term, one and one-half credits. Required.

3. Principles of Education
Two hours, second and third terms, two and one-half credits. Required.
4. Organization and Administration of Rural Schools
Two hours, first term, one credit. Elective.
5. Methods of Rural School Teaching
Two hours, second term, one credit. Elective.
6. Supervision of Instruction in Rural Schools
Two hours, third term, one credit. Elective.
7. Teaching High School Agriculture
Three hours, the year, six credits. Required.
8. History of Agricultural Education
Two hours, first term, one and one-half credits. Required.
9. Organization and Administration of Agricultural Instruction
Two hours, second and third terms, two and a half credits. Required.
10. Agricultural Extension Teaching
Two hours, first term, one credit. Required.
11. Agricultural Practice Teaching
Two weeks of actual practice in teaching High School Agriculture, to be done in the second or third term of the senior year, one credit. Required.
12. History of the American High School
Two hours, first half of first term, one credit. Elective.
13. Methods of Teaching in Secondary Schools
Two hours, second half of first term and second and third terms, three credits. Elective.
14. The High School Pupil
Two hours, first term, one and one-half credits. Required.
15. High School Curricula
Two hours, second and third terms, two and one-half credits. Required.
16. Practicum in Agricultural Education
Two hours, the year, five credits. Elective.
17. Organization and Administration of High School Education
Two hours, first term, one and one-half credits. Elective.
18. Present Practices in High School Instruction
Two hours, second and third terms, two and one-half credits. Elective.
19. General School Administration
Two hours, the year, four credits. Elective.
20. Educational Measurements
Two hours, first term, two credits. Elective.
21. School Surveys
Two hours, second and third terms, two credits. Elective.
22. Educational Theory
Two hours, first term, two credits. Elective.
23. Public School Curricula
Two hours, second and third terms, two credits. Elective.
24. Agricultural Mathematics
Three hours, the session, freshman class. Required.

25. Farm Carpentry
Six hours, first term, freshman class. Required.
26. Farm Blacksmithing
Six hours, second term, freshman class. Required.
27. Farm Implements and Machinery
Six hours, third term, freshman class. Required.
28. Agricultural Drawing
Six hours, first term, freshman class. Required.
29. Agricultural Surveying
Five hours, second and third terms, freshman class. Required.
30. Poultry Breeds and Breeding
Four hours, first term, freshman class. Required.
31. Poultry Feeds, Feeding, and Management
Four hours, second term, freshman class. Required.
32. Egg Production, Marketing, Incubation, and Breeding
Four hours, third term, freshman class. Required.
33. Home Projects and School Gardens
Three hours, the session, sophomore class. Required.
34. Rural Social Conditions
Three hours, first term, junior class. Required.
35. Principles of Rural Economics
Three hours, second and third terms, Junior class. Required.
36. Agricultural Composition
Three hours, first term, sophomore class. Required.
37. Oral Debate and Public Address in Agricultural Subject Matter
Three hours, second and third terms, sophomore class. Required.
38. Agricultural Journalism
One hour, the session, senior class. Required.
39. Agricultural Conference
Meets fortnightly during the senior year. Required.

COLLEGE OF VETERINARY MEDICINE AND SURGERY

By direction of the United States Civil Service Commission and Department of Agriculture, this college has been added to the list of accredited veterinary colleges, and placed in class A.

VETERINARY MEDICINE AND SURGERY.

PROFESSOR CARY.

ASSISTANT PROFESSOR MCADORY.

INSTRUCTOR FERGUSON.

INSTRUCTOR LEWALLEN.

INSTRUCTOR WILLIAMS.

LECTURER BAHNSEN.

LECTURER WHITE.

LECTURER ALLEN.

The four-year course in veterinary medicine and surgery leads to the degree of Doctor of Veterinary Medicine. It has been established to meet the demand of the young men of the South who desire to become educated veterinarians, and for students who desire to prepare for the study of human medicine.

EQUIPMENT.

The main veterinary building has an independent gas plant and a connected sewer system. It is supplied with electric lights and water. The building contains an office, two lecture rooms, a physiological laboratory, and a museum on the first floor; on the second floor are located two research laboratory rooms, a library and reading room, a large lecture room containing an incubator room, and all the necessary apparatus for pathological, histological, and bacteriological work.

A separate building is used as a house for small animals (rabbits, guinea pigs, pigeons, etc.) that are employed for experimental and demonstration work in bacteriology, histology, and physiology.

The anatomy division has a separate one-story brick building with good ventilation and extensive sky light. It is supplied with gas, water, and electric lights. The anatomy museum contains the skeletons of man, the horse, the ox, the sheep, and the pig, and models of limbs and special organs of man and the horse. It is also supplied with different lots of bones of the horse with dissected and dried limbs showing the relation and attachment of muscles. An hexagonal operating pavilion thirty-six feet in diameter is used for surgical

clinic and contains a simplicity operating table. It is supplied with water and electric lights and lockers for students.

The veterinary hospital contains five box stalls, four open single stalls, an office, and feed room, on the first floor; a large room for storing hay, fodder, and feed, is found on the upper floor. The veterinary department has for its exclusive use about six acres of land divided into lots, pens and paddocks. In one of the lots are located two large sheds, having a capacity for accommodating one hundred and twenty-five cattle or large animals. These sheds are used for isolation of animals affected with infectious diseases.

HOG CHOLERA SERUM PLANT.

The hog cholera serum plant occupies about twenty-five acres of land southwest of the College grounds. Upon this are located a large two-story brick and cement serum building (76 x 30), a brick and cement virus building (30 x 36), and a large hog barn (60 x 100) with cement floor. The rooms in the virus and serum buildings are sufficiently large to admit students in the veterinary medical and agricultural courses for instruction in inoculating hogs and in the various processes in making virus and serum. Some of the veterinary medical students work every day in the serum plant and thus become conversant with sterilizing, bleeding, hypering, inoculating and handling the virus, the serum and the hogs.

A well equipped slaughter house has just been completed for the use of the serum plant, the College and the Town of Auburn. It is available to veterinary students for practical experience in meat inspection.

COURSES OF STUDY.

The four-year veterinary course students take six terms of work in the department of animal husbandry and dairying, two terms of work in pharmacy; seven terms of work in the chemical department; two terms of work in botany, and one year's work in English. The facilities and equipment of these departments are excellent.

The veterinary course is especially strong in practical laboratory work.

1. In anatomy the work of dissection is continued through the first, second and third years. It is a well established fact that useful surgery or real anatomy cannot be acquired without careful and thorough work in the dissecting room. Special stress is given to comparative anatomy of the horse, ox, sheep, pig, dog and poultry.

2. Clinical laboratory work is also required throughout the course. The clinical work comes six days in the week and the

cases presented embrace mules, horses, cattle, sheep, dogs, poultry, and hogs. The variety is such as to illustrate a large number of diseases, surgical operations, and therapeutic applications.

3. The physiological laboratory is supplied with apparatus for tests and experiments in physiology.

4. The laboratory for pathology, histology, and bacteriology is extensive, and is fully fitted with the latest apparatus. This laboratory has been the outgrowth of twenty-five years of cumulative additions. The aim is to teach students to work in the laboratory rather than to memorize the printed page of the text-book.

5. In chemistry and toxicology the students work in one of the best of chemical laboratories.

6. In pharmacy the students work in practical pharmacy for five hours a week for two terms. In this they learn to recognize compounds and dispense drugs.

7. The animal husbandry department affords ample facilities for practice in feeding and judging cattle, sheep, hogs, horses and mules.

8. The dairy department gives practical laboratory work in dairy operations and in handling and feeding dairy cattle.

9. The botanical department is well equipped and gives excellent opportunity for laboratory work in poisonous and medicinal plants.

10. The subjects in the course of study are such as are required in the leading veterinary colleges of America. The course meets the requirements of the American Veterinary Medical Association and the Bureau of Animal Industry and United States Civil Service Commission. It is the aim to have the teaching staff meet the requirements of the best standards. The length of the course is four years of nine months each.

Graduates of the College of Veterinary Medicine are admitted by civil service examination to the appointments in the service of the Bureau of Animal Industry of the United States Department of Agriculture and to the army, and also to membership in the American Veterinary Association.

DESCRIPTION OF COURSES.

FRESHMAN CLASSES.

101. Physiology: The students in the special agricultural course, in all of the pharmacy courses, in the course in chemistry and metallurgy, and in the course of veterinary medicine and surgery, all study elementary physiology.

The aim of this course is to teach anatomy, histology, hygiene and sanitation. The instruction is given by lectures, demon-

strations and text-book. Text-book: Martin's Human Body. (Advanced). *Two hours, entire session.*

102. Veterinary Science: Prescribed for freshman veterinary students and juniors in animal husbandry. Elective for all agricultural courses. The aim of the instruction is to teach such lessons as will enable them to prevent many diseases on the farm by correct sanitation. At the same time they will be instructed in the ways and means of treating and handling the common diseases of farm animals. *Lectures two hours and clinics three hours. Veterinary students, first term; juniors in agriculture, entire session.*

103. General chemistry (Agr. 101): This consists of a series of lectures including a discussion of fundamental principles of chemical philosophy in connection with the history, preparation, properties and compounds of the metallic and non-metallic elements, with the main facts and principles of organic chemistry. In this course, the more common applications of chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and approved improvements necessary for presenting the subject in the most attractive and instructive form. *Four hours in class, six hours in laboratory, entire session.*

104. English (Ac. 102a)—Composition and rhetoric: The principles of exposition, narration and description are studied. The students are required to apply these principles in set themes once a week and in frequent exercises. As often as possible the instructor holds personal conferences with students in order to correct, assist and stimulate them. Text-book: Boynton's Principles of Composition. *Three hours, first term.*

105. English (Ac. 102b). American Literature: A survey of the history of American literature together with the study of select masterpieces. The recitations will be devoted chiefly to the discussion of the literature assigned for study, but the students will be required to master a concise history of the subject and to keep notes on both the history and the selections. Text-book: Newcomer's American Literature. *Three hours, second and third terms.*

106. Veterinary medicine: A course covering the internal diseases of solipeds, the horse, mule and ass. *Three hours, second and third terms.*

107. Anatomy: Consists chiefly of dissections with a few lectures and reviews. It covers during this year (a) Osteology, a study of the bones; (b) Arthrology, a study of the articula-

tions; (c) Myology, a study of the structure, form and relations, attachments and functions of muscles. *Ten hours, entire session.*

108. Histology: Treats of the minute or microscopic anatomy of the body. It includes fixing, imbedding, sectioning, mounting, staining and microscopic study of cellular and inter-cellular structure of tissues. It is taught by lectures, text-books and laboratory work. *Five hours, entire session.*

109. Judging dairy and beef cattle: It includes practical exercises in judging the breeds and types of dairy and beef cattle. This work is done by the Animal Husbandry Department. *Two hours, first term.*

110. Judging swine and sheep: This embraces practical exercises in determining the good and bad points of swine and sheep. *Two hours, second term.*

111. Judging horses and mules: This consists of lectures and practical exercises in judging the various breeds and classes of horses and mules. *Two hours, third term.*

112. Clinics: This is a poly-clinic where all kinds of cases and all kinds of animals are clinically examined, studied, operated on, and treated. *Three hours, entire session.*

SOPHOMORE CLASS.

113. Embryology: A study of the development of the embryo in its various stages from the fertilized ovum to the full grown embryo, and is designed to prepare students for the study of the principles of breeding and obstetrics. *Three hours, first term.*

114. Organic chemistry (Agr. 103b): This course, though somewhat more condensed, is similar to Agr. 103 (a), with the exception that the latter part of the course is devoted to a special study of fats, carbohydrates and proteins, with reference to their function in the life processes of plants and animals. *Three hours, first and second terms.*

115. Anatomy: This covers (a) Internal organs; (b) blood vessels, heart, lymph vessels and lymph glands; (c) the nervous system; (d) special sense organs; (e) genito-urinary organs; (f) the foot; (g) the larynx. *Ten hours, entire session.*

116. Veterinary medicine: Embraces a study of the special pathology, etiology, symptoms, diagnosis and treatment of internal diseases of (a) cattle; (b) sheep and goats; (c) swine. *Three hours, entire session.*

117. Clinics: Surgical, internal and external diseases of all animals in the hospital and at the poly-clinic are examined, inspected and studied and recorded by the student. *Eight hours, entire session.*

118. Bacteriology: Includes a study of the pathogenic bacteria, their classification, modes of reproduction, cultural and staining characters, habitat, methods of causing disease, etc. *Six hours, entire session.*

119. Physiological chemistry: Treats of the chemistry of sera, globulins, proteids in the other organic bodies or compounds found in animal bodies. *Four hours, third term.*

120. Pharmacy: Treats of the physical and chemical characters of drugs, preparation of various official drugs and the compounding of prescriptions employed in veterinary practice. *Ten hours, second and third terms.*

121. Botany: A study of poisonous and medicinal plants. *Five hours, third term.*

JUNIOR CLASS.

122. Surgery: This embraces general and special surgery of domestic animals. *Four hours, entire year.*

123. Obstetrics: It embraces the study of the normal and diseased conditions of the animal body during pregnancy. *Two hours, entire session.*

124. Anatomy: Embraces the comparative anatomy of the (a) ox; (b) sheep; (c) swine; (d) dog; (e) cat; (f) poultry. *Eight hours, entire session.*

125. Botany. A continuation of No. 121: A practical study of poisonous and medicinal plants. *Six hours, first term.*

126. Veterinary medicine: This course treats of the internal diseases of the (a) dog; (b) the cat; (c) poultry. *Three hours, first term; four hours, second and third terms.*

127. Veterinary physiology: Treats of normal actions or functions of the organs and apparatus of the bodies of domestic animals in health. *Three hours, first and third terms; four hours, second term.*

128. Clinics: A study of general and special surgical and medical cases presented at the hospital and poly-clinic. *Ten hours, entire session.*

129. Infectious diseases: Embraces a study of the causes, modes of transmission, methods of diagnosis and prevention of communicable diseases of domestic animals. *Three hours, second and third terms.*

SENIOR CLASS.

131. Therapeutics: A study of all materials used in disease and considers the action of these materials or drugs during health and in disease, and their applications or uses in diseases. *Five hours, first and second terms.*

132. Principles of breeding (Agr. 808): Embraces the principles and practices involved in the improvement of domestic animals. The subjects of reproduction, variation, selection, heredity, grading up, etc., will be discussed in their relations to practical breeding problems. *Two hours, first term.*

133. Dairying (Agr. 814): The study of the secretion, characters, composition and production of milk is made; proper methods of handling milk and cream for consumption, pasteurizing and sterilizing are covered. Students are taught how to use the Babcock tester, the lactometer, and to test for lactic acid, for purity and adulterants. They are drilled in butter making and in standardizing milk and cream. Familiarity with the construction, care and operation of the leading makes of cream separators and other dairy equipment is required. *Four hours, second term.*

134. Feeding: Embraces the food requirements for different animals; calculations and mixing of rations, using the various concentrates, roughages, etc. *Three hours, third term.*

135. Surgery: This will be a continuation of special surgery, foot diseases and lameness. *Two hours, first term.*

136. Clinics: Includes special and poly-clinic cases in surgery, internal medicine, infectious diseases, lameness, etc. *Eight hours, entire session.*

137. Pathology: Deals with the anatomy and histology of diseased tissues and organs. The cellular and inter-cellular changes that occur in disease are studied in text-book and lectures, and in the laboratory diseased cells and tissues are examined macroscopically and microscopically. *Seven hours, first term; eight hours, second term.*

138. Meat inspection: A study of the anti-mortem and post-mortem conditions of healthy and diseased animals. The decomposition, putrefaction and fermentation and adulteration of meats are studied. This course embraces lectures, text-book work and laboratory work in class room and slaughter house. Auburn now has a well built and equipped slaughter house. *Three hours, first and second terms.*

139. Milk inspection: Includes a study of diseases of dairy cattle (tuberculosis, udder diseases, etc.,) filth, bacteria and adulterants of milk; feed, water supply, dairy barns, pens and pastures; dairy cans, buckets, bottles, wagons pasteurizers, sterilizers, milk houses, and milkers. *Five hours, third term.*

140. Parasites: This course deals with the plant and animal parasites that infest man and animals. The hosts, anatomy, classification, modes of life, life history, toxic and other effects on hosts are studied. Specimens are collected, classified, mounted or preserved. *Three hours, second and third terms.*

141. Surgical exercises: This consists of a series of practical exercises covering the most common surgical operations. *Three hours, third term.*

142. Urinalysis: This covers a laboratory course in the chemical analysis of the urine of animals. *Three hours, third term.*

143. Thesis: Every student must develop a thesis on some veterinary subject, and this thesis must contain some original investigation. *Three to four hours, entire session.*

144. Toxicology (Agr. 110e): Embraces a study of the actions of poisons on animals, and a laboratory course in the official tests for the different poisons. *Seven hours, third term.*

TEXT AND REFERENCE BOOKS.

General Chemistry—McPherson and Henderson.

Organic Chemistry—Moore.

Physiology Recitations—Martin's Human Body.

Physiology Laboratory—Fish's Elementary Exercises.

Veterinary Physiology—Smith's Manual of Veterinary Physiology.

English—Boynton; Newcomer.

Anatomy—Sisson's Comparative Anatomy; Chauveau.

Clinical Laboratory—Clinic Note Books.

Histology—Bailey; Lectures.

Embryology—Prentiss; Bailey; Lectures.

Principles of Breeding—Marshall.

Feeding Live Stock—Henry; Smith; Jordan.

Livestock Judging—Craig; Plumb; Lectures.

Dairying—Wing.

Botany—Gray; Pammel; Lectures.

Pharmacy—Stevens; Lectures.

Bacteriology—Moore; Lectures.

Pathology—Kinsley; Zeigler; Kitt, Adami.

Obstetrics—Williams; DeBruin; Fleming; Dalrymple.

General Surgery—Frohner; Moeller; Dollar; Lectures.

Special Surgery—Moeller; Merillat; Frohner, Reeks; Lectures.

Surgical Exercises—W. L. Williams.

Materia Medica and Therapeutics—Frohner; Wilcox; Winslow; Fish; Quitman.

Diseases of the Dog—Muller-Glass.

Veterinary Medicine—Law, Vols. 1, 2, 3; Moussu; Friedberger and Frohner; Huytra and Marek.

Diseases of Cattle—Dollar; Moussu; U. S. Department of Agriculture.

Diseases of Swine—Kinsley.

Diseases of Poultry—Kaupp.

Infectious Diseases—Moore; Law, Vol. 4.

- Parasites—Neumann; Law, Vol. 5; Koupp.
Meat Inspection—Edelmann; Mohler-Eichhorn; Ostertag.
Milk Inspection—Ernest-Mohler-Eichhorn; Conn.
Lameness—LaCroix.
Toxicology—Tanner; Fish.
Urine Analysis—Fish.
Restraint of Animals—White.
Castration of Animals—White.

GENERAL INFORMATION

COURSES FOR WOMEN.

With the entry of women into new professions and vocations under modern social conditions, it has seemed an obligation upon the College to make provision for women in the various professional and technical courses, as well as in the academic course of the College, and to make special provision for housing women students.

NEW PROFESSIONS AND OCCUPATIONS FOR WOMEN.

High School Teaching.—Under conditions brought about by the war, under which our young men have gone to the army, women are being called in larger and larger numbers into teaching positions in high schools. Under modern industrial conditions the high school courses of study have undergone marked changes. The old type academic college no longer furnishes adequate training for all high school teachers. It was in large measure due to the recognition of this latter fact that the Department of Education of this Institute was established. In consideration of the facilities for offering training for teachers through the school of Education and in view of the fact that women must in larger measure be relied upon to give high school instruction, it has seemed appropriate to call the attention of suitable women in the State to the facilities offered in the school of Education, and in the various colleges of the Institute.

Architecture and Pharmacy.—Architecture and Pharmacy have proven attractive professions for women. The work of these two professions is admirably adapted to the pursuit of women. The attention of young women of suitable age and preparation is called to the courses of study in the Department of Architecture and Pharmacy in the Institute.

Agriculture.—Agriculture is beginning to draw the attention of women. Many women desire to master those principles and processes which will enable them to direct the various activities of their home farm. Others have a more limited interest and wish only to prepare themselves for prosecuting some single phase of farm life, such as poultry, dairying, bee culture, or horticulture. Women who are interested in these fields are advised to consider the courses offered in the College of Agriculture.

ELECTIVES FOR WOMEN.

The Institute has no department of Home Economics, but recognizes the value of training in Home Economics. Women

students, therefore, who have had Home Economics training of college grade in other institutions, may offer credits in the same in lieu of courses prescribed in the various courses of study in this institution. Such substitutions, however, shall be upon the approval of the Dean.

Other electives may be arranged with the approval of the appropriate Dean, provided such electives are consonant with a definite purpose in training.

HOME FOR WOMEN STUDENTS.

For women students room and board will be arranged under the best home conditions. The culture and refinement so essential to the proper environment of young women will receive especial attention in selecting a home for them.

CADET BAND

A. L. THOMAS, Bandmaster.

Three musical organizations are maintained—the band, the orchestra, and the glee club. Membership in these organizations is open to any student who has musical talent.

The band is maintained by the college for students who desire to develop their musical ability and for those who wish to learn music. It furnishes music for all colleges exercises, and takes part in military manoeuvres. Regular and individual instruction is given free of charge during the first term, embodying the rudiments of music and general musical information in conjunction with the practical instruction on the instrument. Public concerts are given weekly during the second term, and engagements elsewhere are usually arranged.

A gold medal is given each year by the bandmaster to the member who makes the best record.

The orchestra is an organization for musical recreation, and members are carefully selected by the director according to their musical ability.

The glee club, comprising the quartet, chorus, and stringed instruments is a student organization. The services of a musician are secured to assist with the instruction and training of the quartet and chorus. Two concerts are given at the college and concert tours are arranged during the second and third terms.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This association is regularly organized and a suite of well furnished rooms has been secured for its exclusive use. Through its weekly meetings and Bible Study Classes it exerts a wholesome Christian influence among the students.

Students are advised to unite with the association when they enter the college.

The ladies of the different churches in Auburn are organized into an auxiliary association to the Y. M. C. A. of the college.

LITERARY SOCIETIES.

There are two literary societies connected with the Institute—the Wirt and the Websterian. Each has a hall in the main building. These societies hold celebrations on the evenings of Thanksgiving and 22nd of February.

To encourage the literary societies the trustees have directed that a medal be awarded at Commencement to the member of each society who is both efficient and regular in attendance, and who is the best debater. The method of selection is determined by the faculty.

SOCIETY OF THE ALUMNI.

The annual alumni oration is delivered by a member of the society in Langdon Hall on Alumni Day, Monday of Commencement week.

OFFICERS OF THE ALUMNI ASSOCIATION.

Clarence N. Ousley, '81, Washington, D. C.-----Orator
Thomas Bragg, '01, Auburn, Ala.-----President
H. M. Martin, '14, Auburn, Ala.-----Secretary and Treasurer

ENGINEERING SOCIETY.

All students in the courses of engineering and architecture are eligible for membership in the Engineering Society. Meetings are held twice a month, and the chief purpose of the society is to promote personal fellowship among the members, and closer affiliation with practical engineers. Prominent engineers in all lines are invited to address the society from time to time upon subjects connected with their work. At other meetings the program is supplied by the student members, thus giving opportunity for the students in one department to become somewhat familiar with the problems met with in other lines of engineering.

Suitable quarters have been provided for the society in the new Broun Engineering Hall. No regular dues are required of the members, but an occasional assessment is made to cover necessary expenses.

ARCHITECTURAL ASSOCIATION.

The Architectural Association is open to all members of the college who take work in the department of architecture. Bi-weekly meetings are held in the architectural library, and papers presented on subjects of professional interest, not directly covered in regular courses; the discussions that follow are always lively ones. Current articles in the technical jour-

naïs are also taken up. Nothing could furnish a more striking example of the enthusiastic attitude shown by architectural students everywhere toward their chosen work, than these gatherings of the architectural association.

AGRICULTURAL CLUB.

The Agricultural Club was organized in 1907. All students interested in agriculture and the agricultural sciences are eligible for membership. The members of the Agricultural Faculty take an active part in the work of the club. Meetings are held once a week, and an effort is made to promote interest in all lines of agriculture, to develop a spirit of good fellowship among the students of the course, and bring them in contact with prominent workers of the science as opportunity offers to present them on the regular program.

Meetings are held in the club rooms in Comer Agricultural Hall.

VETERINARY MEDICAL ASSOCIATION.

The Veterinary Medical Association was organized in 1907. The meetings are held bi-weekly in the veterinary building. Medical subjects are discussed by the members or by some invited speaker or member of the veterinary faculty. All students of the Veterinary College are eligible to membership. The objects of the association are fraternal, intellectual and cultural. The annual banquet of this association is an occasion of good fellowship for the students, faculty, and veterinary alumni.

GYMNASIUM AND ATHLETIC FIELD.

The new Alumni Gymnasium offers improved facilities for complete physical training in outdoor and indoor work. The college authorities attach due importance to the value of robust physical health. Military drill according to the Federal Law is required of all able-bodied students, and ample opportunity is also offered for work in the gymnasium and field sports. The aim of the athletic authorities is to develop, not only a set of highly trained athletic experts in particular fields of sports, but to interest each individual student in the care and development of the body through some form of athletic activity. While, therefore, every effort is made to retain a high standard of athletic efficiency in various representative teams, every member of the "Auburn" student body is encouraged to gratify his love for games and sports, as well as to assimilate the "Auburn Spirit" in its intensest form; a spirit splendidly exemplified by the Alumni in making possible this handsome Gymnasium. This beautiful athletic home ranks "Auburn" as

one of the best equipped colleges in the land for the development of the physical welfare of its students. Under present conditions it is possible for two thousand students to take physical exercise at the same time.

DRAKE FIELD—A new athletic field, named in honor of the Surgeon, Dr. J. H. Drake, has been provided for baseball, football, and track athletics. It is situated on the experiment station grounds near the gymnasium. It will be gradually beautified and equipped with necessary buildings and accommodations.

DISCIPLINE REGULATIONS.

The government of the college is administered by the president and faculty in accordance with the code of laws and regulations enacted by the trustees.

Each student upon entering is required to sign his name in the matriculation book and pledges himself to obey the rules and regulations of the college.

All students are required to wear the prescribed uniform.

Attention to study and punctuality in attendance on recitations and all other duties are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using or causing to be brought into the college limits, intoxicating liquors.

Students are not permitted to participate in any public entertainments, or games, without previously obtaining the consent of the faculty.

No student will be permitted without the approval of his parent or guardian, to take part in a public game of football.

No student who has failed in two or more subjects will be permitted to be absent from college for athletic contests or other purposes.

(a) Every absence from recitations or examination is graded zero.

(b) When the grade of a student is lowered by reason of absence, for which satisfactory excuse can be rendered, a special re-examination may be subsequently granted, and the grade made on the special re-examination alone is substituted for that previously received.

(c) Only sickness, as reported by the surgeon, or absence by reason of family sickness, or official or collegiate business, will constitute a satisfactory excuse for granting a re-examination.

When a student is called away from college by his parents for reasons other than those specified above, his zeros for absence are not removed.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

The term grade of a student is the average of his daily, sessional and term examination marks, found by giving due weight to the term examination.

Only privates of the senior class in full standing who are candidates for graduation may be excused by the president from all military drills, and also students over twenty-one years of age *at the time of entering college* that are permitted to devote their time to one special study, as chemistry, agriculture, pharmacy, or engineering, provided the time devoted to drill is spent by them in laboratory work.

No student can remain an officer who receives during the session more than one hundred demerits.

BOARDING

The students board at Smith Dining Hall or with families of the town of Auburn, thus enjoying all the protecting and beneficial influences of the family circle.

For each house an inspector is appointed, whose duty it is to report those who are guilty of any violation of order. The report of the inspector is made to the commandant at stated intervals.

Students, after selecting their boarding houses, are not permitted to make changes without obtaining permission from the president, and this permission is given only at the close of a term, except for special reasons approved by the parent.

MILITARY DRILL.

There are three regular military drills each week, and all undergraduate students, not physically incapacitated to bear arms, are required to engage in these exercises; privates of the senior class are exempt.

The drills are short, and the duty involves no hardships. The military drill is a health-giving exercise, and its good effects in the development of the *physique* and improvement of the carriage of the cadet are manifest.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel. All students, unless excused on the written request of parents for religious scruples, are required to attend these exercises, and also to attend the church of their choice on Sunday morning.

Opportunities are also offered for attending Bible classes every Sunday.

DISTINCTIONS AND HONORS.

Certificates of highest distinction and of distinction are given on the basis of credits, one credit being considered as the equivalent of one recitation per week for one term. Two hours of laboratory or shop work or drawing are counted as one hour of recitation. An undergraduate student taking less than an average of eighteen credit hours per term will not be eligible for distinction. Certificates will be awarded to those students who have not received more than forty demerits, and who comply with the scholarship requirements announced by the faculty.

Members of the senior class who attain highest distinction are published as *Graduates with Highest Honor*; those who attain distinction are published as *Graduates with Honor*; seniors who do not attain distinction, but who attain a grade of sixty per cent or above are published as *Graduates*.

RECORDS AND REPORTS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

At the close of each term and at regular intervals reports giving the grade made by each student are sent to the parent or guardian.

EXAMINATIONS.

Written examinations on the studies of the half-term are held by each professor during the months of October and February. Each examination occupies one hour.

At the end of each term written examinations, or written and oral, are held on the studies passed over that term.

Special examinations are held only by order of the faculty, and in no case will private examinations be permitted.

Students falling below the minimum grade at the final examination can be promoted to full standing in the next higher class only on satisfactory examinations at the opening of the next session.

It is required that every student who enters college shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within three weeks of the examination, except for providential reasons.

RE-EXAMINATIONS.

Re-examination for deficiencies incurred by students before entering the senior class shall be set not later than the first week in April, except when deficiencies are being made up in class. Seniors failing in any subject will have two opportunities for removing the conditions.

No senior who fails on two final examinations will be re-examined.

No re-examination will be given seniors after the Saturday before Commencement.

HONOR SYSTEM.

During the session of 1910-11 the Honor System, which for years had been in effect in the higher classes, was adopted by the entire student-body of the institution, to apply to all work done in the class-room and on examinations. Under this system the student is pledged neither to give nor receive any assistance, whatsoever.

All students upon entrance subscribe to the Honor System as in force at this institution.

Proper regulations for administering the system have been adopted by the student-body.

The spirit of truth and honor, thus fostered in the examination room, is an efficient means of raising the scholarship, and tends to inculcate high ideals of honor among the students.

SCHOLARSHIPS.

The following scholarships and prizes have been established:

THE WILLIAM LEROY BROUN MEMORIAL SCHOLARSHIP OF \$170, established by the Alumni Society, in memory of the late distinguished president of the Institute.

THE LIGON SCHOLARSHIP OF \$170, established by Col. R. F. Ligon, Montgomery, Ala.

THE THOMAS SCHOLARSHIP OF \$170, established by Judge William H. Thomas, Montgomery, Ala.

THE BALL SCHOLARSHIP OF \$170, established by Mr. Fred S. Ball, Montgomery, Ala.

THE DUNKLIN SCHOLARSHIP OF \$600, established by Mr. and Mrs. J. C. Street, Opelika, Ala., in memory of Prof. J. T. Dunklin, former professor of Latin in the college.

THE 1908 SCHOLARSHIP OF \$150, established by the Class of 1908.

THE ALICE CARR SCHOLARSHIP OF \$180, established for young women by the late Miss Alice Carr, Auburn, Ala.

THE RANSOM MEMORIAL SCHOLARSHIP OF \$125, per year, established by the Alumni Association in memory of the late Prof. A. McB. Ransom, is available for students in the junior and senior classes of the course in chemistry and metallurgy.

THE JEWISH LOAN SCHOLARSHIP OF \$1,000, established by a former student of the college.

TWO HENDERSON SCHOLARSHIPS OF \$100 each, established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE SIDNEY SMITH MEMORIAL SCHOLARSHIP OF \$100, established by his parents, Mr. and Mrs. Smith, Bessemer, Ala.

THE C. S. YARBROUGH SCHOLARSHIP OF \$1,000 established by Dr. C. S. Yarbrough, Auburn, Ala.

A scholarship has been established for worthy musicians who are in need of assistance in defraying their college expenses.

THE ALABAMA FEDERATION LOAN SCHOLARSHIP OF \$200 annually, established in 1917 by the Alabama Federation of Women's Clubs.

The conditions governing the award of this scholarship are as follows:

(a) The beneficiary shall be a young woman resident of Alabama, between the ages of 18 and 24 years, prepared to enter the junior class.

(b) She must be unable to complete her education without financial assistance.

(c) She must maintain the required standard in scholarship, attendance and conduct. Failing in any of these requirements, she may be replaced by another beneficiary appointed in the same manner.

(d) The beneficiary must be free from any other financial obligation.

(e) Repayment of this loan shall be made at the rate of \$100.00 a year, without interest, the first payment becoming due the first year after graduation or resignation.

(f) The beneficiary shall signify her perfect understanding of these terms by signing a paper of agreement to be presented to her by the President of the Alabama Polytechnic Institute.

All applications should be sent to the Chairman of the Federation Scholarship Committee, Mrs. C. Clifford Adams, 3421 Willow Avenue, Birmingham, Alabama.

The scholarships enumerated above are loan scholarships, granted to worthy young men and women, to be returned after graduation.

THE ROBERT E. LEE MEMORIAL SCHOLARSHIP OF \$100, an annual donation for the son of a Confederate veteran, established by the Children of the Confederacy of Alabama under the auspices of Mrs. Mary G. Pickens.

THE UNITED DAUGHTERS OF THE CONFEDERACY LOAN SCHOLARSHIP OF \$100, established in 1908 by the Alabama Division of the United Daughters of the Confederacy to be awarded by a committee of the Division to a descendent of a Confederate veteran.

The above named scholarships and ten other scholarships are administered by the Alumni Society. (*For information, address H. M. Martin, Secretary.*)

THE GRAYDON SCHOLARSHIP FUND OF \$3,000 established by the family of the late Augustus T. Graydon, of South Carolina, a loyal alumnus of the class of 1914.

SOUTHERN RAILWAY LOAN SCHOLARSHIP OF \$1,000, established by the Southern Railway in memory of the late W. W. Finley, President of the Southern Railway.

PRIZES.

THE THOMAS ESSAY PRIZE, a gold medal offered by Hon. William H. Thomas, of Montgomery, Ala., for the best essay by an undergraduate student of the college. The essay must be written under the supervision of the department of English. 1917, *Oscar LaFayette Martin*, South Carolina.

THE SOUTHERN INTERCOLLEGIATE ARCHITECTURAL COMPETITION in Senior Design is held in the Spring of each year by an association composed of the leading colleges of the South offering courses in architecture. Funds for suitable prizes are provided by the State Chapters of the American Institute of Architects. At the close of the competition the competing drawings are exhibited in turn at each of the schools taking part in it.

THE MILLER REESE HUTCHISON MEDAL FOR ENGINEERING WRITING: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison, of Orange, N. J., to the member of the senior class who does the most satisfactory work in the course of Engineering Writing. The work must be done under the supervision of the Department of Machine Design.

THE MILLER REESE HUTCHISON MEDAL FOR INVENTIVE DESIGN: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison, of Orange, N. J., to the member of the junior class who does the most satisfactory work in the course of Inventive Design. The work must be original and must be done under the supervision of the Department of Machine Design.

THE ORATORICAL PRIZE, medal to that member of the junior class who composed and delivered the best oration on junior class day of Commencement.

THE ORATORICAL PRIZE, for the Annual Inter-Literary Society Contest, February 22.

SOPHOMORE MEDAL, Best Debater, 1917: *Euel Howard Gentry*, Bibb County.

FRESHMAN MEDAL IN DECLAMATION for annual contest, May 1st, 1917: *William Lee Sims*, St. Clair County.

PRIZE FOR BEST DEBATER, a medal given annually by the Board of Trustees to the best debater in the Wirt and Websterian Literary Societies each. 1917: Wirt—*Roland Lee Sparkman*, Jefferson County; Websterian—*Oscar LaFayette Martin*, South Carolina.

BEST DECLAIMER IN LITERARY SOCIETIES, 1917: Wirt—*Edward Hofford Todd*, Jefferson County; Websterian—*Edwin Bragg Lancaster*, Sumter County.

REGIMENTAL MEDAL, for the best drilled soldier, 1917: *John Peyton Fuller, Jr.*, Madison County.

PRIZE FOR BEST DRILLED COMPANY, a sword given by Board of Trustees. 1917: *Harry Peckham Sparkes*, Jefferson County.

LIBRARY.

LIBRARIAN, JAMES R. RUTLAND.

ASSISTANT LIBRARIAN, MISS MARY MARTIN.

ASSISTANT MISS THOMPSON.

ASSISTANT SIMS.

ASSISTANT WILSON.

The beautiful Carnegie Library building is constructed of stone and pressed brick. The reading room is 80 x 40 feet, and the building is equipped with every convenience. It is lighted by electricity and heated by steam. The capacity of the stack room is 60,000 volumes. The library now contains 28,000 volumes, including valuable reference and scientific books, with select editions of standard authors, and others suitable for students, carefully and recently selected. It is kept open eight hours daily for the use of students as a reading room and is thus made an important educational feature.

THE O. D. SMITH COLLECTION.

The library of the late Prof. O. D. Smith has been presented to the college by Mrs. O. D. Smith, and is preserved as a memorial to his long and distinguished services to the college.

THE F. D. PEABODY MEMORIAL ROOM.

Through the generosity of Mr. George Foster Peabody, New York City, an annual fund of fifty dollars, income from a permanent investment is available for the purchase of books and furniture for the "F. D. Peabody Memorial Historical Seminary." F. D. Peabody, Esq., was a distinguished graduate of the Class of 1876.

THE W. D. TAYLOR MEMORIAL COLLECTION.

The engineering library of the late W. D. Taylor, chief engineer of the Chicago and Alton Railway, was bequeathed by him

to the Alabama Polytechnic Institute, and is preserved by the College as a memorial to this distinguished alumnus. Mr. Taylor was a graduate of the Class of '81, and was regarded as one of the leading civil engineers of the United States.

MUSEUM.

The Museum occupies a large room in the third story of the Main Building. It is provided with suitable cases, and is equipped with valuable specimens and models of an instructive character.

UNIFORMS.

A uniform of gray cadet cloth is prescribed, which all undergraduate students are required to wear during the session. The uniforms are made by a contractor, and are of excellent cloth manufactured at the Charlottesville Mill. A suit, including cap, costs at present \$23.00. It is neat and serviceable, and less expensive than ordinary clothing.

LABORATORY FEES.

Each student in the following courses is required to pay the laboratory fee specified.

Chemical laboratory	\$ 5.00
Pharmacy laboratory	5.00
Electrical engineering laboratory	5.00
Mechanical engineering laboratory	5.00
Veterinary medicine (dissecting fee)	10.00
Dairy laboratory	3.00
Soils laboratory	3.00
Horticultural laboratory	1.00
Botanical laboratory	1.50 to 2.50
Civil engineering (surveying)	1.00
Civil engineering (road materials laboratory)	1.00
Civil engineering (summer camp, including board)	18.00
Entomology	1.00
Zoology	1.00

Special students in laboratory work will pay additional fees for each separate division of work, and will be charged with all material consumed in experiments.

CONTINGENT FEE.

A contingent fee of \$2.50 is required to be deposited by each student on matriculation to cover any special or general damage to college property for which he may be liable. General damages are assessed on the body of students.

At the close of the session the whole of the contingent fee or the unexpended balance, is refunded to the student.

FUNDS OF STUDENTS.

Parents or guardians are advised to deposit with the treasurer of the college all funds desired for sons or wards, whether for regular charges, college fees or board or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands and to pay all expenses incurred by the students, including board, uniform, books, etc.

The college cannot be held responsible for the expenses of a student unless the funds are deposited under specific instructions from the parent or guardian to the treasurer. No student should be permitted to have a large amount of pocket money, as it brings only trouble, and encourages idleness.

NON-RESIDENT STUDENTS.

Tuition for students not residents of Alabama is \$20.00 per session, unless remitted by the trustees to worthy students upon the recommendation of the faculty.

The remission of this tuition fee to non-resident students will be granted in the form of a free scholarship for the succeeding year to those who obtain a distinction the preceding year, or who, by reason of merit, are deemed worthy.

The following non-resident students were granted, each by reason of special merit in conduct and scholarship during the session of 1916-1917 an honor scholarship, which exempted from tuition fees:

William Wallace Allen	-----	Florida
William Arnold Guess	-----	Mississippi
Frederick Jolly Matthews	-----	Georgia
Christopher John Murray	-----	Tennessee
Frank Wilson Parker	-----	Kentucky
John Patrick Sullivan	-----	South Carolina
Lionel Earl Tisdale	-----	Florida
John Herman Trapp	-----	Mississippi
Lewis Candler Vaughn	-----	Georgia

EXPENSES.

There is no charge for tuition for a resident of Alabama.

Board, including lodging, fuel, and lights, is furnished at \$15.50 to \$20.00 per month.

For non-residents of the State there is a charge of tuition of \$20.00 per session, payable on matriculation, in addition to the annual fees payable by all students. A student once entering as a non-resident will not be permitted to claim residence unless his parent or guardian becomes a resident or tax payer on property in Alabama. Tuition for non-residents is remitted to sons of ministers of the Gospel.

AMOUNT OF DEPOSIT.

All fees, including laboratory fees, are payable on matriculation. *By order of the Trustees a matriculation fee of \$12.00 is retained from deposits of students who withdraw. To students who withdraw after one month's residence in college only the remainder of the laundry fee and the contingent fee, less charges, may be returned; no laboratory fee may be returned; after the beginning of the third term only the contingent fee may be returned.*

Fees to be paid on entrance:

Incidental	\$ 5.00	
Library	2.00	
Surgeon	5.00	
Contingent	2.50	
Athletic	6.00	
Uniform	23.00	
Laundry fee for session	12.50	
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For a resident of Alabama	\$56.00	\$56.00
Tuition non-resident		20.00
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For a non-resident		\$76.00

THESIS.

Each applicant for a degree is required to write and submit to the faculty a thesis, or oration and read or deliver the same at Commencement, if required by the faculty.

There may be presented with the approval of the professor in charge, a carefully written report of special work done in a laboratory, showing independent investigation and discussion of some subject.

It must be given to the professor by the first of May. The subject must be submitted for approval by January 1st.

SURGEON.

The Surgeon is required to be present at the college daily, to visit at their quarters the cadets that are reported sick, and give all requisite medical attention without other charge than the regular surgeon's fee, paid on entering the Institute.

An infirmary has been established and is properly equipped.

LOCATION.

The Institute is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railway of Alabama.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty-six feet above tidewater. By statute of the State the sale of spirituous liquors and the keeping of saloons of any kind are forbidden.

ACADEMIC YEAR.

The academic year for 1918-19 commences on Wednesday, September 11, 1918, and ends on Tuesday, June 3, 1919, which is Commencement Day.

It is divided into three terms: The first term extends from the opening of the session to December 20th; the second term begins January 2nd, and ends March 24th; the third term continues to the end of the session.

REGISTER

MILITARY ORGANIZATION SESSION 1917-18

RESERVE OFFICERS' TRAINING CORPS.

President

CHAS. C. THACH

Commandant

EDWARD T. WINSTON, U. S. A., Ret.

Surgeon

DR. J. H. DRAKE

Regimental Commander

Cadet Colonel John P. Shaffer.

Regimental Staff

Cadet Lieut. Col. John M. Ward.

Cadet Capt. W. H. Withington, Adjutant.

Cadet Capt. J. A. Strozier, Supply Officer.

Regimental Non-Commissioned Staff

Cadet Sergeant J. J. Ryan, Sergeant Major.

Cadet Sergeant W. H. Philpot, Quartermaster Sergeant.

Cadet Sergeant W. R. Turnipseed, Color Sergeant.

Cadet Sergeant J. T. French, Color Sergeant.

Cadet Sergeant C. T. Tucker, Drum Major.

First Battalion

Cadet Major W. W. Allen.

Cadet First Lieutenant A. J. Kirby, Adjutant

Cadet Sergeant W. J. Ross, Battalion Sergeant Major.

Cadet Captains

Company A	Company B	Company C	Company D
H. Witherington	O. H. Schultz	R. T. Kernachan	W. A. Guess

Cadet First Lieutenants

Y. C. Sills	G. L. Burleson	Y. A. Elizondo	J. C. Ard
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Cadet Second Lieutenants

D. Jordan	J. M. Sparrow	L. G. Duggar	J. A. Shealy
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Cadet First Sergeants

B. Chambers	G. W. Duncan	J. M. Rainer	H. J. Daniel
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Cadet Sergeants

G. A. Wright	R. P. Simmons	E. E. Terry	L. L. Self
R. H. Turner	G. E. Lumpkin	J. R. Nesbitt	E. A. Caldwell
E. B. Crawford	W. D. Kimbrough	R. S. Reed	F. Walker
L. E. Tisdale	J. W. Tidmore	F. J. Matthews	C. J. Brockway
	J. M. Fullan	H. T. Killingsworth	

Cadet Corporals

C. E. Stapp	F. W. McMeans	W. L. Douglas	W. C. Edwards
J. B. Suggs	L. C. Watson	M. L. Perdue	C. J. Perryman
I. M. Griffin	S. C. Rutland	D. Crain	H. A. Milliken
H. Carder	L. Frown	W. F. Godwin	R. B. Kelly
A. Shaver	J. D. Hatchford	E. P. Garrett	A. L. Jones
H. C. Snellgrove	C. S. Peter	J. D. Foster	M. Taylor
	E. Collier		A. F. Alsobrook

Second Battalion

Cadet Major J. H. Hamilton.

Cadet First Lieutenant C. B. Crow, Adjutant.

Cadet Sergeant J. H. Watson, Battalion Sergeant Major.

Cadet Captains

Company E	Company F	Company G	Company H
J. T. Fowler	W. W. Sullivan	O. L. Martin	W. C. McKay

Cadet First Lieutenants

O. N. Massengale	J. T. Hudson	J. S. N. Davis	J. B. Mayes
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Cadet Second Lieutenants

S. W. Hill	E. O. Duffey	J. A. Peterson	L. H. Heyman
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Cadet First Sergeants

S. J. Nadler	P. W. Pelts	V. C. Hanna	C. H. Adams
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Cadet Sergeants

J. H. Drake	N. D. Spann	J. P. Sullivan	E. F. Pollard
J. P. Fuller	E. V. Frederick	G. E. Burgin	J. Thomas
J. W. Pruett	J. E. Howell	W. M. Mobley	F. H. Cutts
N. B. Sullivan	H. L. Reynolds	C. J. Murray	S. C. Phillips
			M. L. Bonner

Cadet Corporals

R. C. Bradford	P. Frederick	W. A. Pipkin	D. C. Jimmerson
L. C. Vaughn	R. H. Hamner	A. A. Smith	J. H. Murray
E. C. Nichols	S. L. Threadgill	W. L. Holmes	G. A. Mattison
E. W. Freeman	McK. Heath	W. B. Howard	M. E. Bryant
G. W. Jones	E. L. Harper	A. J. Bowab	J. H. Beckham
C. E. Carlovitz	W. M. Little	G. H. Wright	W. Cook
C. H. Bedingfield	D. D. Major	J. H. McIntosh	J. L. Elliott

THE CADET BAND

Session 1917-18

A. L. THOMAS, Bandmaster

Military Officers

R. R. McAdory	Lieutenant
L. G. Duggar	Lieutenant
C. T. Tucker	Sergeant and Drum Major
J. W. Pruett	Sergeant
G. A. Mattison	Corporal
J. D. Foster	Corporal

Musicians

Cornets

T. M. Brannon
J. Memoli
L. G. Duggar
E. W. Freeman
A. M. Dowling
J. M. Merritt

Altos

A. T. Levie
J. W. Pruett

Baritones

W. M. Stewart
W. E. Conger

Flute and Piccolo

J. A. Douglas
J. M. Linx

Bass Tubas

G. A. Mattison
L. P. Hodges

Clarinets

R. R. McAdory
R. S. Allen
M. A. Martin
H. Urdong
A. C. Moye
B. L. Ward

Saxophones

W. L. Riley
J. D. Foster
G. B. Warren
H. K. Stephenson

Trombones

R. P. Simmons
C. H. Speigner
S. H. Dent

Oboe

M. Greenburg

Drums

G. M. Meriwether
J. R. Moon
B. W. Clendinen

Bugle Corps

D. H. Holder
S. G. Harper
J. S. Kernachan
J. J. Beggs
C. E. Reid
H. L. Biggin

Cadets of the graduating class who were reported to the Adjutant General, U. S. Army, as having ranked highest in the Military Department:

1889

A. St. C. Dunstan
B. H. Crenshaw
A. J. Burr

1890

F. D. Milstead
J. W. Bivins
G. W. Emory

1891

L. E. Baker
C. C. Johnson
F. J. Bivins

1892

H. F. Dobbin
A. L. Jones
C. L. Brown

1893

Joel Dumas
C. H. Smith
J. F. Webb

1894

C. S. Andrews
P. P. McKeown
R. L. Dorsey

1895

S. L. Coleman
H. H. Smith
L. B. Gammon

1896

A. L. Alexander
W. L. Fleming
W. M. Williams

1897

P. G. Clark
G. M. Holley
G. N. Mitcham

1898
A. H. Clark
A. McB. Ransom
John Haralson

1899
I. F. McDonnell
A. H. Fergin
T. W. Wert

1900
E. M. Mason
H. P. Powell
C. W. Nixon

1901
A. F. Jackson
J. D. Foy
P. S. Haley

1902
W. D. Willis
J. E. D. Yonge
J. B. Garber

1903
H. E. Davis
H. M. Yonge
T. J. Dowdell

1904
J. McDuffie
B. L. Shi
Geo. Dunlinson, Jr.

1905
R. P. Boyd
R. H. McCulloh, Jr.
J. H. Paterson

1906
W. H. Foy
F. H. Molins
M. A. Frazer

1907
N. B. McLeod
W. L. Perdue
G. F. Lipscomb

1908
S. A. Ellsberry
C. M. Howard
R. H. Liddell

1909
J. W. Powell
S. H. Richardson
T. Beasley

1910
D. M. Clements
C. C. Yonge
J. M. Spearman

1911
J. E. Davis
J. J. Cater
G. Lothrop

1912
S. R. Cruse
C. C. Thach, Jr.
F. L. Jenkins

1913
R. A. McGinty
D. L. Taylor
H. C. Hanlin

1914
R. E. Herring
W. B. Tisdale
E. F. Barry

1915
D. D. Gibson
C. A. Donehoo
W. F. Littleton

1916
E. W. Smith
C. E. Newman
A. E. Hayes

1918
J. H. Witherington
J. A. Strozier
C. B. Crow

DISTINGUISHED STUDENTS

SESSION 1916-17.

Students who receive a grade of above 90 per cent, and less than 95 in the prescribed number of subjects, are distinguished for excellence in scholarship, and are awarded Certificates of Distinction. Those who receive a grade above 95 per cent, are awarded Certificates of Highest Distinction.

FRESHMAN CLASS.

DISTINCTION.

Daniel Garland Barnes	Dale
Thomas Lyons Bradley	Jefferson
George Clay Brown	Lamar
Hamlin Alexander Caldwell	Jackson
Raymond Austin Chambers	Limestone
Stuart Hubert Dent	Barbour
Charles Wesley Edwards	Coffee
Lester Lamar English	Morgan
Charles Ewell Floyd	Lee
Joseph Langhorne Hammond	Etcwah
James Arnold Harmon	Chambers
Milton Oliver Howle	Jefferson
Edward Clare Jacob	Dallas
Joseph Benjamin Kantor	Jefferson
Hanson Stakely Keller	Jefferson
Albert Shelton Lisenby	Houston
John Burrow Looney	Jefferson
Amos Bender Miller	Cullman
Oscar Albin Nelson	Jefferson
James Cornelius O'Neal	McBile
Robert Homer Orr	Chambers
Ernest Eugene Price	Talladega
James Paul Robinson	Choctaw
William Richmond Stephens	Lee
Dana Gibson Sturkie	Lee
Joe Thomas	Tallapoosa
Edward Hofford Todd	Jefferson
John Herman Trapp	Mississippi

HIGHEST DISTINCTION.

Augus Mancill Dowling	Barbour
Lecil Verland Evans	Lamar
Edwin Bragg Lancaster	Sumter
Claude Sizemore	Fayette

SOPHOMORE CLASS.

DISTINCTION.

Simeon Arthur Allen	Shelby
Costa Boone Barker	Lee
Helen Blasingame	Lee
Lyle Brown	Choctaw
Ollie Clifton Bryan	Coffee
Thomas Browning Chambers	Limestone
Eugene Benson Crawford	Macon
Marion Graves Crothwait	Jefferson
Llewellyn Goode Duggar	Lee
James Douglas Foster	Lee
William Duke Kimbrough	Wilcox
Frederick Jolly Matthews	Georgia
Christopher John Murray	Tennessee
Solomon Joseph Nadler	Etowah
Russell Sage Reed	Etowah
Alma Smith	Lee
John Patrick Sullivan	South Carolina
Emmett Edwin Terry	Madison
Lionel Earle Tisdale	Florida
Roy Hope Turner	Tallapoosa
Lewis Candler Vaughn	Georgia
William Benjamin West	Cherokee

HIGHEST DISTINCTION.

James Hodges Drake	Lee
George Alfonso Wright	Lee

JUNIOR CLASS.

DISTINCTION.

William Wallace Allen	Florida
George Larkin Burleson	Marion
William Arnold Guess	Mississippi
Robert Thomas Kernachan	Colbert
Otto Henry Schultz, Jr.	Jefferson
Laura Watt	Lee
William Herman Withington	Jefferson

SPECIAL STUDENTS.

DISTINCTION.

Carl Herman Brill	Jefferson
John Fletcher Yarbrough	Houston

HIGHEST DISTINCTION.

Frank Wilson Parker	Kentucky
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GRADUATES

CLASS OF 1917.

HONORS.

Members of the Senior Class who attain distinction with a grade of 95 per cent, are graduates with Highest Honor. Those who attain a distinction with a grade of 90 per cent, and less than 95, are Graduates with Honor. Those who attain less than 90 per cent, and more than 60 per cent, are Graduates.

DEGREES.

BACHELOR OF SCIENCE.

GRADUATES.

Saul Perry Adelson	Jefferson
Irvin Gravely Ammen	Jefferson
William King Askew	Marengo
Thomson William Bailey	Jefferson
Hammond Dudley Baker	Lee
Harrison Bates	South Carolina
Theodore Russell Benning	Georgia
Roger McIver Bostick	Mississippi
George Randolph Bowling	Tallapoosa
Howard Milton Boyd	Lee
William McClellan Bruce	Wilcox
Cyril Kenneth Bryan	Blount
Frate Bull	Marion
Hugh Otis Burgess	Cleburne
Francis William Burns	Clay
Guy Olney Burns	Lauderdale
Charles Cleveland Bush	Talladega
Hugh William Caffey	Jefferson
Colonel Richard Carnes	Marion
Abner Boone Chapman	Covington
James Arthur Chappell	Jefferson
Frederick Victor Cluis	Georgia
Mary Glenn Crenshaw	Lee
Lewis Battle Dean	Tallapoosa
Leo Donovan	Dallas
John Andrew Douglas	Mobile
Albert Hugh Dumas	Lee
Julius Eagle	Dallas
Annalee Edwards	Lee
Harrison Bartow Emerson	Etowah
Seth Jordan Floyd	Lee
Gordon Greene Ford	Franklin
Joseph Marshall Foulks	Louisiana
Loraine Walker Funk	South Carolina
Daniel Andrew Helmich	Jefferson
Edward Beverly Henry	Lee
James Edwin Hickey, Jr.	Montgomery
Lovic Pierce Hodnette	Macon
Daniel Webster Hollis	Henry
Ray Milton House	Calhoun
William John Howard	Montgomery
Leon Ledyard Jeffrey	Wilcox
John William Johnston	Blount
George Allard Kaufmann	Louisiana
James Marion Kelley, Jr.	Georgia
Captain Tullis Knight	Barbour
Lesley Bateson McCoy	Escambia

Thomas Turner McLemore	Jefferson
Oscar L. McMurray	Franklin
Lawrence Marvin McRae	Chambers
George Rufus Mays	Marion
Samuel Douglas Melanson	Louisiana
James Foy Middlebrooks	Barbour
James Kirk Newell	Tallapoosa
John Carew Powell	Montgomery
Homer Prendergast	Texas
William Thomson Price	Tuscaloosa
Bryan Pritchett	Clarke
James Frederick Pruett	Russell
Dibble Manley Rickenbaker	South Carolina
Walter Hugh Roberts	Baldwin
Carey Carlisle Robinson	Lee
James Donald Russell	Calhoun
Atlee Davis Sample	Morgan
Abb Llewellyn Scarbrough	Calhoun
John Hadley Scott	Tennessee
Harry Berry Seybt	South Carolina
John Parker Shaffer	Tallapoosa
Sylvester Guinn Sharit	Jefferson
James Edgar Shotts	Marion
Frank King Simmons	Florida
Augustus Hoke Sloan	South Carolina
Harry Peckham Sparkes	Jefferson
William Augustus Stickney	Calhoun
Phillip Avary Terrell	Lee
Richard Hartwell Thach	Lee
Herbert Wright Thomason	Lee
John Earle Thomason	Lamar
Ira Asa Thompson	Pike
Henry Philip Trawick	Lee
Lovell Lack Turley	Missouri
Conrad Gray Wall	Jefferson
Alfred Benjamin Walter, Jr.	Louisiana
John Meriwether Ward	Greene
Jesse Jordan Warren	Montgomery
George Egbert Weber, Jr.	Lee
James Wallace Whatley, Jr.	Lee
Wheeler Williams, Jr.	Russell
David A. Woodard	Louisiana
Barbara Wright	Lee

GRADUATES WITH HONOR.

Glenn Andrews, Jr.	Montgomery
William Watson Barron	South Carolina
Walter Gustavus Bevell, Jr.	Hale
Roy Gatman Carpenter	Marion
Ernest Linwood Deal	Tuscaloosa
Joseph Best Grimsley	Georgia
Henry Harris House	Etowah
Charles L. Isbell	Lee
William Jesse Isbell	Lee
Thomas McDonald Jones	Coosa
Thomas Jefferson Jordan	Marshall
William Robert Lassiter	Lee
Hester Marion Lewis	Bibb
William Wyman Owens	Pike
Allen Benjamin Pimm	Florida
Emma Rebecca Stodghill	Lee
Shu Min Wong	China

GRADUATES WITH HIGHEST HONOR.

William Lee Blanton	Florida
James Roy Hines	Chambers
Phares Woods Matthews	Jefferson
Wilbur Thomas Shinholser	Georgia
Lamar Mims Ware	Georgia
Gordon Worley	Tailapoosa

GRADUATES IN PHARMACY (PH. G.)

GRADUATES.

Leslie Allen Akins	Barbour
Charles Martin Cherry	Houston
Ernest Matkin Dunn	Marengo
James Thomas Farmer	Geneva
Henry Carl Fischer	Cullman
Pugh Bryan Harris	Pike
Glover Abraham Johnston	Cherokee
George Lawrence Morris	Crenshaw
Byron Ross McBryde	Geneva
Henry Erskine McNamara	Jefferson
Rhett Goode Reynolds	Crenshaw
Carl Vernon Tanner	Mobile

GRADUATE WITH HONOR

Charles George Yarbrough	Monroe
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GRADUATES IN VETERINARY MEDICINE (D. V. M.)

Dee Lloyd Allen	Sumter
William Elmer Bachelor	Elmore
Carey Linwood Bell	North Carolina
Daniel Lorenzo Campbell	Lee
Elmer Bernard Campbell	Marshall
Billy Elza Carlisle	Macon
Hosmer LaFayette Farr	Jefferson
Condie Pugh Gaston	Wilcox
Robert Henry Glenn	South Carolina
Leonard Johnston Hill	Calhoun
Thaddeus Henry Ingram, Jr.	Lee
Byron Newman Lauderdale	Coosa
Harmon King Law	Pike
William Lonnie Parrish	Chilton
Leon Louis Powell	Choctaw
Walter James Schimmel	Jefferson
Edward Hunter Welles	Tennessee

POST GRADUATE DEGREES.

MASTER OF SCIENCE.

James Warren Andrews	Montgomery
Joseph Calloway	Montgomery
Frank Kitchell Nesbitt	Jefferson
Samuel Andrew Wingard	Montgomery

PROFESSIONAL DEGREES IN COURSE.

CIVIL ENGINEER.

Charles Hereford Gilmour	Jefferson
Percy Reynolds Smith	Jefferson

ELECTRICAL ENGINEER.

Lee Irwin Davis	Mobile
Harry Gordon Farris	Etowah
Thomas Christopher Rives	Montgomery

MECHANICAL ENGINEER.

Edward Gatchell	Lee
George Lampros	Montgomery

CATALOGUE OF STUDENTS

SESSION 1917-1918

GRADUATE STUDENTS.

Howard Milton Boyd	Lee
Thomas William Clift	Madison
John Andrew Douglas	Mobile
Charles L. Isbell	Lee
Alan Benjamin Pimm	Florida
Carey Carlisle Robinson	Lee
John Parker Shaffer	Tallapoosa
Cleveland Gillespie Sharpe	Morgan
John Meriwether Ward	Greene

SENIOR CLASS.

Roger William Allen	Jefferson
William Wallace Allen	Florida
Jerome Cochrane Ard	Dale
James Oliver Avery	Marion
Marion Russell Avery	Franklin
William Henry Avery	Marion
Berta Leon Balch	Macon
Costa Boone Barker	Lee
Forest Reynolds Birchfield	Jefferson
Madison LeRoy Bonner	Clay
Charles Jacob Brockway	Sumter
Ollie Clifton Bryan	Coffee
Jesse Samuel Burbage	Jefferson
Gurley Everett Burgin	Jefferson
George Larkin Burleson	Marion
Green Berry Bush, Jr.	Choctaw
Ralph Akin Carroll	Lee
Elwyn Allen Cary	Lee
William Edmond Conger	Louisiana
Charles Brandon Crow	Walker
Herschel Jackson Daniel	Georgia
John Stephen Neal Davis, Jr.	Georgia
Ralph Emerson Davis	Georgia
Robert Floyd Donehoo	Blount
Charles Edwin Doughtie, Jr.	Georgia
Richard Joseph Ducote	Mobile
Elmer Odell Duffey	Jefferson
Llewellyn Goode Duggar	Lee
Yndalecio Andres Elizondo	Mexico
McKendree Heard Floyd	Lee
James Thomas Fowler, Jr.	Houston
William Edward Frawley, Jr.	Jefferson
Ernest Vossie Frederick	Marion
Edwin Wills Freeman	Florida
James Tarver French	Pike
William Arnold Guess	Mississippi
Wayne Willard Hall	DeKalb
Joseph Henry Hamilton	Jefferson
George Boltz Hawthorne	Wilcox
B. H. Haynes, Jr.	Clay
Lewis Harris Heyman	Tennessee
Samuel White Hill	North Carolina

John Thomas Hudson, Jr.	Tennessee
Samuel Robert Huey	Jefferson
David Charles Jimmerson	Lee
Elizabeth McTyeire Johnson	Lee
Lucius Wiley Johnson	Tuscaloosa
Neal Corbley Johnson	Colbert
Robert Dawson Jordan	Crenshaw
Robert Thomas Kernachan	Colbert
Albert Johnson Kirby	Jackson
Benjamin Terrell Kirby	Georgia
Augustus Theodore Levie	Coosa
William Lithgow Liddell	Wilcox
George Ernest Lumpkin	Marshall
Richard Rose McAdory	Jefferson
William Cook McKay	Montgomery
Oscar Lafayette Martin	South Carolina
Oliver Norfleet Massengale	Elmore
James Belser Mayes, Jr.	Georgia
Robert Lee Miller	Walker
Harold Anderson Milliken	Jackson
John Herbert Murray	Escambia
Jule Rembert Nesbitt	Jefferson
Frank Wilson Parker	Kentucky
Julius Albert Peterson	Coosa
Ellison Avery Phillips	Clay
William Henry Philpot, Jr.	Macon
Henry Leland Reynolds	South Carolina
Herbert Balsham Rigby	Georgia
Joe Posey Robertson	Fayette
William Johnston Ross	Calhoun
John James Ryan	Tennessee
Otto Henry Schultz, Jr.	Jefferson
Albert Sidney Scott	Walker
Leroy LaFayette Self	Blount
John McElroy Selman	Coosa
Arthur Shaver	Cullman
John Andrew Shealy	Louisiana
Albert Edward Sheridan	Georgia
William Clem Sills	Wilcox
Robert Paul Simmons	Dale
Thomas Andrew Sims	Walker
John Marion Sparrow	Lee
Jason Weldon Spencer	Florida
Alexander Clifton Stewart	Escambia
William Matthew Stewart	Jefferson
John Alan Strozier	Georgia
William Woodward Sullivan	South Carolina
Esther Thompson	Randolph
William Rufus Turnipseed	Bullock
Charles Spencer Warren	Montgomery
John Harrison Watson	Lee
Laura Watt	Lee
Ulon Victor Wellons	Georgia
William Benjamin West	Cherokee
James Henry Witherington	Conecuh
William Herman Withington	Jefferson
John Fletcher Yarbrough	Houston

JUNIOR CLASS.

Charles Harris Adams	Dale
Simeon Arthur Allen	Shelby
Adrian Fuller Alsobrook	Chambers
James Hugh Little Anderson	Calhoun
Charles Herschel Bedingfield	Lauderdale
Helen Louise Blasingame	Lee
Anthony Joseph Bowab	Escambia
Richard Courtlandt Bradford	Cherokee
Thomas Milton Brannon	Barbour
Lyle Brown	Choctaw
Marvin Earle Bryant	Baldwin
Europe Alexander Caldwell	Jackson
Homer Carder	Jefferson
Colon Eric Carlovitz	Mississippi
Thomas Browning Chambers	Limestone
Eugene Collier	Morgan
William Cook, Jr.	Walker
Eugene Benson Crawford	Macon
Frederick Harder Cutts	Georgia
Lewis Schuessler Dowdell	Chambers
James Hodges Drake	Lee
Frederick Myrick Duncan	Georgia
George Webster Duncan, Jr.	Lee
William Correll Edwards	Chilton
James Lawrence Elliott	Shelby
James Douglas Foster	Lee
Philip Frederick	Georgia
James Michael Fullan	Lee
John Peyton Fuller, Jr.	Madison
Edmond Peter Garrett, Jr.	Limestone
James Needham Gilmer	Choctaw
William Francis Godwin	Georgia
Joseph McCormick Gondran	Louisiana
Ivy Moore Griffin	Clarke
Paul Stanley Grimes	Georgia
Glynn Hightower Grisham	Limestone
James Madison Hall, Jr.	Bullock
Verner Cyril Hanna	Mississippi
Walter Elbert Harrell	Lowndes
DeWitt Herndon Holder, Jr.	Mississippi
William Louis Holmes	Houston
John Edward Howell	Dale
E. C. Johnson	Georgia
Arthur LaFayette Jones	Calhoun
Grady Whittle Jones	Escambia
Archie Monroe Kearley	Monroe
Henry Thomas Killingsworth, Jr.	Georgia
William Duke Kimbrough	Wilcox
William Mem Little	Georgia
James Henry McIntosh, Jr.	Franklin
Forrest Whitlock McMeans	Jefferson
Merlin Angelo Martin	Mobile
Frederick Jolly Matthews	Georgia
George Augustus Mattison, Jr.	Clay
Willard Mitford Mobley	Jefferson
Minnie Murphy	Macon
Christopher John Murray	Tennessee
Solomon Joseph Nadler	Etowah

Earl Cochran Nichols	Clarke
Phillip William Pelts	Mississippi
Marvin Lucian Perdue	Coffee
Capers Jones Perryman	Jefferson
Charles Scudder Peter	Shelby
Sidney Clarke Phillips	Mobile
Wilbur Arnold Pipkin	Florida
Elisha Frederick Pollard	Crenshaw
Jefferson William Pruett	Coosa
Joel Marbury Rainer	Bullock
Russell Sage Reed	Etowah
Silas Clifford Rutland	Georgia
Alma Smith	Lee
Angus Atkinson Smith	Geneva
Lansing Taylor Smith, Jr.	Calhoun
Henry Clay Snellgrove	Marshall
Norman Dantzer Spann	Houston
Cohen Elbert Stapp	Pickens
William Richmond Stephens	Lee
John Patrick Sullivan	South Carolina
Nim Belotte Sullivan	South Carolina
John Braden Suggs	Talladega
Marvin Taylor	Marion
Emmett Edwin Terry	Madison
John Thomas	Marengo
James Wallace Tidmore	Hale
Lionel Earl Tisdale	Florida
Giles Chambliss Toole	Georgia
Cyril Theodore Tucker	Mobile
William Henry Tucker	Chambers
Roy Hope Turner	Tallapoosa
Glover O'Neal Waits	Covington
Felix Augustus Walker	Russell
Harold Walker	Jefferson
Arthur Herbert Williamson	Lowndes
George Alfonso Wright	Lee
George Herbert Wright	Lee

SOPHOMORE CLASS.

James Harvey Allen	Calhoun
Robert Stanton Allen	Jackson
Charles Carlisle Anderson	Walker
Charles Randolph Barksdale	Bullock
Daniel Garland Barnes	Dale
Earl Daniel Bartlett	Clay
Raymond Ruskin Beard	Mobile
Robert Marion Beasley	Lee
Mafus Bird	Marengo
Thomas Lyons Bradley	Jefferson
Warren Calvin Brice	North Carolina
Oma Wesley Bridges	Macon
Andrew Alonzo Burke	Houston
Joseph Chandler Burton	Marion
Hamlin Alexander Caldwell	Jackson
Frederick William Calhoun	Jefferson
William Alfred Cammack	Clarke
Mortimer Garnett Cassell, Jr.	Dallas
Noah Winston Caton	Covington
Horace Weldon Chaddick	Tennessee
Raymond Austin Chambers	Limestone

George Little Clarke	Crenshaw
James Barfield Coney	Georgia
George Samuel Cooper	Lee
John Francis Cooper, Jr.	Tuscaloosa
Benjamin Jacobs Coplan	Jefferson
Warren Crain	Wilcox
John Paul Creel	Jefferson
Osler Gilbert Crow	St. Clair
Marvin Trowbridge Crymes	South Carolina
Edward Pilate Culpepper	Henry
Thomas Micajah Culpepper	Georgia
William Walter Culver	Houston
Richard Buey Deason	Walker
Stuart Hubert Dent	Barbour
John Bealie DeRamus	Chilton
Angus Mancill Dowling	Barbour
John Hodges Drake, Jr.	Lee
Wells Roney Draughon	Geneva
Russell Duff	DeKalb
Charles Wesley Edwards	Coffee
Albert Elmore	Marengo
Lester Lamar English	Morgan
Lecil Verland Evans	Lamar
Gordon Farned	Franklin
Walter Jeremiah Fickling	Georgia
Charles Ewell Floyd	Lee
George Lunsford Foster	Lee
Henry Clarke Frazer	Chambers
John Thomas Frazer	Chambers
William Williams French, Jr.	Jefferson
Robert Calloway Gaines	Clay
Junius Roach Gardner, Jr.	Jefferson
James Erskine Gillespie	Marshall
Leon Bell Gladish	Tennessee
Walter Hayne Gordy	Louisiana
Harless Grace	Walker
Charles Merrill Gray	Walker
John Martin Griffin, Jr.	Jefferson
Massey Christopher Griffin	Clarke
Alfred Flournoy Griggs	North Carolina
Isham Belle Gunter	Lee
Lindsey Jesse Gunter	Lee
Andrew Byron Hall	DeKalb
Jesse Pankey Hall	Etowah
Wallace Howard Hall	Montgomery
William Stephenson Halsey	Colbert
John Garmon Hamilton	Franklin
Sidney Guenveur Harper	Montgomery
Creshull Charles Harrison	Florida
Ernest Westcott Harvey	Montgomery
Arthur Lee Hayley, Jr.	Walker
Oliver Ripley Head	Shelby
Clifford Pinkney Hendricks	Blount
Howell Payne Hines	Lee
Orville Butler Hodges	Madison
Joseph Kyle Holley	Elmore
Simeon Witt Hooper	Marshall
Nichols Leon Howard	Autauga
John Monroe Howarth	Chambers

Milton Oliver Howle	Jefferson
Cecil Daniel Hughes	Calhoun
Joseph Frank Hughes	Jefferson
Joseph Theodore Hury	Jefferson
Edward Clare Jacob	Dallas
Clint Jacobs	Coosa
Jerry Leslie Jimmerson	Lee
Joel Edward Johnson (Irregular course)	Geneva
Richard Malcolm Johnston	Jefferson
Edward McCurdy Jones	Lee
Joseph Benjamin Kantor	Jefferson
John Simmons Kernachan, Jr.	Lauderdale
George Barnes Komp, Jr.	Mississippi
Melton Winship Kyser	Elmore
Edwin Bragg Lancaster	Sumter
Matthew Lawson	Montgomery
Howard Stuart Leach	Montgomery
Lamar Cantelou LeBron (Irregular course)	Elmore
Charles Gordon Ledyard	Jefferson
Thomas Benjamin Lee	Barbour
Frank Underwood Leonard	Jefferson
Albert Shelton Lisenby	Houston
Peyton Brantley Little	Franklin
Oglesby Ashley Lowe	Lee
Edward Simeon McCree	Tallapoosa
Hugh Lee McDonald, Jr.	Georgia
Jesse Newman McLane	Florida
Fontaine Alexander Maddox	St. Clair
Alfred Shelby Martin	Jefferson
James Fontaine Maury, Jr.	Mobile
Archie Vernon Meigs	Clay
Janssens Joseph Melancon	Louisiana
Amos Bender Miller	Cullman
Joachim Perrenot Milligan	Covington
Jacob Robert Moon	Coosa
Frank Stewart Morgan	Dallas
Walter Gilliam Murdoch	Jefferson
Frederick Musgrove (Irregular course)	Marion
Oscar Albin Nelson	Jefferson
Thomas Michael Norton, Jr.	Bullock
James McCarty Oliver	Jefferson
James Cornelius O'Neal	Mobile
Winfield Scott Owsley	Elmore
Frank Page	Houston
Gerald Walstein Pearson	Georgia
James Byrd Pilcher	Houston
Ernest Eugene Price	Talladega
Grover Washington Ray	Tallapoosa
Robert Presly Rebman	Lawrence
George Daly Revington, Jr.	Tennessee
Adam Olin Riser, Jr.	Jefferson
Robert Clyde Rogers	Escambia
Crawford Allen Rose	Louisiana
Edward Lee Ruff	Macon
Roy Lester Salter	Jefferson
James Drake Samford	Lee
William James Samford	Lee
James Ash Scoggins	St. Clair
John Phillip Shealy	Houston

Claude Sizemore	Fayette
Emmett Sizemore	Fayette
Ernest Gustave Small	Dallas
Charles Paddock Storrs	Elmore
Francis Seaborn Stubbs	Georgia
Dana Gibson Sturkie	Lee
Edgar Cecil Taylor	Crenshaw
Jack Tamblyn	Jefferson
Joe Thomas	Tallapoosa
Edward Hofford Todd	Jefferson
James Bennett Townsend	South Carolina
John Herman Trapp	Mississippi
Joseph Pierce Trotter	Baldwin
Himan Urdong	Jefferson
Erskine Vandegrift	St. Clair
Lewis Candler Vaughn	Georgia
John Virgil Waits	Georgia
Chester Clyde Warren	St. Clair
George Butler Warren	Morgan
Lynn Casey Watson	Jefferson
Carl Eric Wideberg, Jr.	New Jersey
John Bonard Wilson	Lee
William Patrick Wilson	Mississippi
George Raymond Wood	Baldwin
Aaron Montgomery Woodall	St. Clair
Arthur Paschal Woodfin	Perry
Leonard Rudolph Wright	Georgia
Calvin Locke Young	Texas
John Guinn Young	Georgia

FRESHMAN CLASS.

Joe Morris Acker	Etowah
David Clopton Adams, Jr.	Morgan
James Abner Allen, Jr.	Lee
Van Court Andrews	Montgomery
Walter Wild Andrews	Clarke
Alvin Alexander Bailey	Jefferson
Marcus Ralph Barker	Lee
Wyss Leo Barker	Lee
Herbert Bernard Barks	Jefferson
Metullus Ard Barnes (Irregular Course)	Dale
Samuel Thomas Barnes, Jr.	Clarke
Edgar Barnett	Houston
Frank Madison Barnett	Bullock
Chester Arthur Barrett	Texas
A. D. Bell	Talladega
Franklin Evelyn Bell	Florida
Edwin Stratford Bennett	Montgomery
Thomas Clayton Berry	Texas
Harold Lyle Biggin	Lee
Daniel Eugene Bivins, Jr.	Florida
Robert Henry Bowron	Jefferson
Alfred Boyd	Lee
Jacob Murphree Boyd	Pike
Charles Henry Bradley	Coffee
Charles Collier Bright	Crenshaw
Daniel Sharpe Brock	Sumter
John Morgan Brown	Lee
Paul Jones Brown	Morgan
Bert Nathan Bryan	Georgia
James Lake Buchanan	Colbert

Bartow Bullard	Coffee
John Kavanaugh Bullock	Montgomery
Henry Bernard Burke	Florida
Joe Leland Burnett, Jr.	Jefferson
William Fitzhugh Byrd	Jefferson
Norman Glenn Camp	Georgia
Lamar Cantelou	Elmore
Williams Caldwell Chambers	Limestone
Louise Chrimes	Massachusetts
William Jefferson Christian	Jefferson
Ralph Colman Christopher	Choctaw
Leigh Malet Clark	Crenshaw
Paul Clarke	Walker
Benjamin White Clendinen, Jr.	Houston
Eugene Alexander Colbert	Tennessee
Frederick Lawson Cook	Georgia
Rodney Copeland	Macon
Joseph Monroe Corry	Walker
William Madison Cosper	Colbert
David Purser Cowen	Jefferson
Lawrence Welch Crane	Jefferson
Francis Lauren Crocker	Walker
Garland Richardson Crow	Lauderdale
Roland Anderson Crump, Jr.	Montgomery
Edward Fletcher Darby	Jefferson
Clifford Gilmore Davis	Texas
Clyde Odeska Davis	Tallapoosa
Albert Perry DeShazo	Jefferson
Mason James Dillard	Jefferson
Frank Perry Dobson	Talladega
David Merrick Dowdell, Jr.	Florida
Madie Dowdell	Lee
William James Dowdell	Lee
Paul Lamar Draper	St. Clair
Joe Driver	Randolph
Thomas Duboise	Franklin
Clyde Dunn	Lamar
William Joseph Dunn	Conecuh
William Cornelius Eppes	Marengo
Walter Crenshaw Ernest, Jr.	Mobile
Samuel Wesley Esslinger	Madison
James Lewis Evans	Jefferson
Joel Daniel Feagin	Bullock
Helen Preston Field	West Virginia
Wayne Arnold Finger	Mississippi
James Lavoisier Fulghum	Florida
Melville Gray Fuller	Madison
John Edgar Funderburg	Calhoun
Louis McLean Funderburg	Calhoun
Leonard Stephen Furr	DeKalb
Harry Forney Garretson	Washington
Henry Stanley Genius	Louisiana
Ludwell Evans Gissendanner	Dale
Garner Ashby Goodbread	Dale
George Ogilvie Greene	Bibb
Virgil Roy Greene	Winston
Melvin Hagedorn	Etowah
Richard Lester Haggard	Etowah
Herbert Louis Hahn	Jefferson

Edward Flemmon Hall	Jefferson
Edward Cardie Hanson	Louisiana
Phillip Henry Hardie	Calhoun
Joseph Crosland Hare	Lee
Grange Harold Harper, Jr.	Monroe
James Calhoun Harris, Jr.	South Carolina
John Evander Harris, Jr.	Sumter
William Wesley Hatcher	Dale
Lyle Jorman Hillman	Dallas
Robert Charles Hillman	Dallas
Linnie Pitt Hodges	Houston
Warren Speigner Hoffman	Lee
Joseph Alfred Holland	Madison
Harvey Holstun	Tallapoosa
Hollis Oswald Holstun	Tallapoosa
Joseph Meyer Holzman	Dallas
Mather Daniel Hood	Etowah
Roy Walthal House	St. Clair
Curtis Samuel Howard	Bullock
Jesse Wilfred Howe	Madison
Thomas Francis Hudson	Tennessee
Michael Huey	Pike
Frederick Hunt	Chambers
James Daniel Hurlbert	Sumter
George Bullock Inge	Mobile
Mose Jacobs	Jefferson
Frank Inge Jeffrey	Wilcox
Charles Hanson Johnson	Tallapoosa
Reuben Lee Johnson	Tallapoosa
Sidney Walton Johnson, Jr.	Lee
Charles Nathan Johnston	Marengo
Eugene Rhodes Johnston	Jefferson
George Edward Johnston, Jr.	Washington
Danby Hobson Jones	St. Clair
Emmett Leslie Jones	Barbour
Edgar Keenon, Jr.	Jefferson
William Pierce Kelly	Madison
Thomas Ford Kendrick	Dallas
Alfred Daniel Killian	Tennessee
John DeLoach King	Lee
John Kenneth Kirkwood	Lee
George Glenn Lamar	Lee
Colquitt Hill Lane	Lee
Charles Thomas Lehman, Jr.	Jefferson
Felix Newman Leslie	Madison
Neilmore Letson	Walker
Elkan Leva	Dallas
Jack Marc Linx	Jefferson
Amsie Horton Lisenby	Houston
Lane Wilson Lollar, Jr.	Walker
Edwin Marshall Lovelace	Escambia
John Witty Lovin	Morgan
Lige Loy, Jr.	Jefferson
William Charles McCall	Georgia
Henry White McCorkle	Perry
Webb McCoy	Marengo
Henry Grady McCrary	Walker
Ellis Pelham McDonald	Jefferson
Frank Sidney McFaden	Montgomery

Henry Curtis McFarlin	Florida
George Dewey McIsaac	Tennessee
Dacy B. McVay	Clarke
Charles William McWillie	Mississippi
Norman Wilfred Mandy	Jefferson
Robert Lee Martin	Jefferson
William Burress Martin	South Carolina
Wilbur Lee Martin (Irregular course)	Limestone
Julius Patrick Maxwell	Dallas
Daniel Lewis Meade	Dallas
Benjamin Watson Melvin	Tuscaloosa
George Michael Meriwether	Marengo
Joseph Marion Merritt, Jr.	Houston
Andrew Campbell Mitchell, Jr.	Jefferson
Henry Banks Mitchell	Georgia
Guy Hicks Morgan	Crenshaw
Joseph Worthington Morris	Walker
Emory Morton	Bullock
Andrew Clinton Moye, Jr.	Georgia
Morgan Russell Murrell	Texas
Ralph Dewey Neal	Jefferson
Carl Godlove Neidhardt	Jackson
Maine Eyric Nettles	Montgomery
James Dannely Newton	Houston
Wendell Oliver Neel	Arkansas
Charles George Ollinger, Jr.	Mobile
Rodney Mattis Ollinger	Mobile
Lee Percy Oliver	Tallapoosa
William Palmer	Wilcox
Edwin Lewis Parker	Mississippi
William Vandyke Pattillo	Morgan
Oliver Kennedy Perkins	Florida
Lee Colquitt Perry	Georgia
Lyman Loomis Peterson	Coosa
Emmett Eugene Pinkston	Georgia
Paul Augustus Potts (Irregular course)	Georgia
Elwyn Nimmons Powell	Georgia
Cyril Hugo Pruet	Lee
Russell Aubrey Pruet	Lee
Clyde Augustus Pruitt	Wilcox
Gaston Randman	Jefferson
Ped Ray	Covington
Albert Miles Redd	Bullock
Cyrus Eugene Reid	Montgomery
Ralph Lawson Riley	Georgia
William Leonard Riley	Jefferson
Edward Auberts Roberts	Mobile
Sloan Rowan	Lowndes
Robert Edgar Rutledge	Jefferson
Charles Max Sabotka	Morgan
Edgar Franklin Sanborn	Georgia
Joseph Sanders	Houston
Ezra Wilson Sartain	Walker
Julius Douglas Schaub	Barbour
Charles Scott	Jefferson
Eunice Brooks Seale	Hale
Ira Jackson Sellers, Jr.	Jefferson
James Wellington Shealy	Florida
James Wiley Shepherd, Jr.	Walker

Edward Cruch Sherling	Butler
William Gurley Simpson, Jr.	Wilcox
Edwin Huson Sims, Jr.	Georgia
Charles Alstin Smith	Talladega
Thomas Long Smith, Jr.	Jefferson
Weldon Theodore Smith	Georgia
Ralph Madison Snider (Irregular course)	Jefferson
Charles Hiram Snuggs	Randolph
Alexander H. Speigner	Houston
William Philip Spratling	Lee
Gladys Steadham	Lee
Cecil James Steele	Franklin
Henson Knowles Stephenson	Dallas
William Allen Stevenson	Macon
Robert Lee Sutton, Jr.	Dallas
Murray Taylor	Marion
Roy Leonard Thomas	Limestone
Wortham Ficquett Thomas	Tallapoosa
Thomas Lee Tidmore	Hale
Urman Totty	Elmore
Eugene Robbins Vaughn	Dallas
John Vernon	Jefferson
Graham Stewart Vinson	Florida
James Dallas Wade, Jr.	Montgomery
Dewey Clyde Waits	Jefferson
Charles Davis Walker, Jr.	Marengo
Preer Walton	Georgia
Birma Leon Ward	Houston
Charles Lenard Warner, Jr.	Clarke
Edwin Fontaine Warren	Lee
Luther Board Watson, Jr.	Wilcox
Joseph Tee Watt	Lee
Edgar Reid Watts	Walker
John Dayton Waugh	Montgomery
John Louis Whatley	Lee
Leta Casey Whatley	Lee
John Eric Wideberg	New Jersey
David Dewey Wier	Mississippi
Ernest Albert Wilkinson	Autauga
Edward Everett Wilkinson	Clarke
Jerry Isaac Williams	Jackson
Vester Vanderbilt Williams	Marion
Lawrence Earle Williamson	Clarke
William Herman Winton	Butler
Allen Killebrew Wood	Jefferson
Ralph Mason Wood	Dallas
Silas McWilliams Yarbrough	Limestone

TWO-YEAR COURSE IN AGRICULTURE.

SECOND YEAR.

Edward Fulmer Armstrong	Jackson
Arthur Clayborn Cadenhead	Lee
John Hunter Carr	Mississippi
John Roger Chambliss	Autauga
Lamont Major	Jefferson
Lewis Joseph Raemon	Jefferson
Lee Roy Roberts	Calhoun
William Harper Spencer	Greene
William Alberto Stiles	Jefferson
Richard Allen Vinton	Tennessee

FIRST YEAR.

James Fortner Agee	Marengo
James Tait Beck	Wilcox
Luther Exelle Boozer	Marengo
Jefferson Leon Clay	Dallas
Albert Darrington Gayle	Dallas
William Daniel Gillis	Florida
Jeremiah Baxter Harpold	Texas
Baldwin Walton Harvey	Montgomery
Joshua Oscar Kelly, Jr.	Madison
Joe Wheeler Malone	Jefferson
Charles Lewis Mathews	Montgomery
Clarence Morris	Talladega
Rufus Elisha Poole	Butler
Samuel Shepherd	Walker
Julian Marsh Tait	Wilcox
William Biggers Whatley	Lee

TWO-YEAR COURSE IN APPLIED ELECTRICITY.

SECOND YEAR.

Golden Cecil Cruise	Dallas
Howard Lamar, Jr.	Lee
Joe Memoli	Jefferson
Fletcher Whitfield Powers	Tuscaloosa

FIRST YEAR.

Louis Cornelius	Etowah
Eugene C. Coston	Jefferson
George Williamson Cushing	North Carolina
Jesse Bruce Hain	Dallas
Robert Lee Howard	Macon
Dozier Lester	Mississippi
Charles Augustus Miller	Marengo
James Joseph Paul	Jefferson
Alfred Adkins Tharpe	Jefferson
Gautier Foster Thompson	Macon

TWO-YEAR COURSE IN MINING

FIRST YEAR

Perry Caldwell DeBardeleben	Dallas
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PRE-MEDICAL COURSE.

William Wallace Barnett	Houston
Gill Wyeth Blackshear	Florida
Otis Winfield Britt	Covington
Jerome Cochran Chapman	Geneva
George Andrew Hazelwood	Jefferson
Lucien Hill	Pickens
Howard Grey Holland	Houston
Marcus Crew Hunt	Chambers
Robert Edward Lacy	Jefferson
Louis Schroades McMurray	Pennsylvania
John Comer Nichols	Clarke
Julian Gary Palmer	Lee
Lee Palmer	Washington
Byron Yarbrough Pennington	Covington
Richard Olney Russell	Morgan
Oscar Grady Segrest	Tallapoosa
Edwin LaRue Spence	Georgia
Archie Edwin Thomas	Coosa

IRREGULAR STUDENTS.

Joseph Greene Allen	Montgomery
Daniel Marshall Andrews	Montgomery
John Joseph Beggs	Jefferson
Mose Bilder	Tennessee
Thomas Henry Burton, Jr.	Calhoun
Giles Homer Carlovitz	Louisiana
Elmer Rice Chambliss	Autauga
Frank Marion Cottle	Etowah
Desmond Crain	Wilcox
Berry Cruse	Jefferson
Edwin Didlake	Jefferson
Thomas White Doster	Jefferson
Arthur Maultsby Dowell	Jefferson
Harry Sisson Fullwood	Jefferson
John McKee Gould, Jr.	Greene
Maurice Greenburg	Jefferson
Adolphus Alexander Hale	Sumter
Charles Harvey Ham	Etowah
Wallace Redding Hartsfield	Jefferson
Grover Jackson Hornsby	Elmore
Milo Barrett Howard	Montgomery
Earle Cothran Jones	Calhoun
Raymond Boone Kelly	Jefferson
Admiral Dewey Kilgore	Randolph
Robert Duane Knapp	Lee
Imogene Inge Little	Mobile
James Thomas Logan	Coosa
Cummings Harrington McCall	Montgomery
Edward Flack McDuffie	Etowah
Gastin Alexander McKnight	Marengo
Victor Irwin Masters	Georgia
Marcus Gatewood Milligan	Cleburne
Daniel Devote Monroe	Jefferson
James Gay Nall	Jefferson
Burke Dulain Ponder	Georgia
Manuel Gomez Ribeiro Netto	Brazil
Howard Sanford Seay	Georgia
William Lee Sims	St. Clair
Frank Western Stevens	Dallas
William Henry Stoves	Jefferson
Weston McLean Sullivan	Sumter
Young Wall	Limestone
Walter Alexander Whatley	Lee
John Stanton Woodson	Walker
Eugene Lyon Wynne	Marengo

DEPARTMENT OF PHARMACY.

FOUR-YEAR COURSE.

SENIOR CLASS.

William Henry Philpot ----- Macon

THREE-YEAR COURSE.

FIRST YEAR.

William Gerard Fowler ----- Montgomery

Benjamin Hartwell Hill ----- Houston

TWO-YEAR COURSE

SECOND YEAR.

Frederick Armstrong ----- Calhoun

Robert Turpee Ashurst, Jr. ----- Tallapoosa

Henry Grady Buchanan ----- Tennessee

John Rufus Evans ----- Georgia

Ford Benson Patterson ----- Baldwin

Reuben Jackson Plant ----- Tallapoosa

Thomas Simes ----- Marshall

Milton LeGrand Wood, Jr. ----- Montgomery

FIRST YEAR.

McKinley Gassett ----- Dale

Reuben Early Ginn ----- St. Clair

Edwin Moody ----- Pickens

Thomas Boyd Price ----- Pickens

Guy Elias Sharpless ----- Geneva

Selman Lamar Threadgill ----- Dallas

George Mark Wood ----- Montgomery

John Melvin Young ----- Mobile

IRREGULAR STUDENTS.

Alvie Omega Mooneyham ----- Barbour

COLLEGE OF VETERINARY MEDICINE

THIRD YEAR.

Thomas Walter Boman ----- Cleburne

Richard Taylor Compton ----- Marengo

Francis B. Cook ----- Choctaw

Turner Mitchell Dennis ----- Chilton

William Francis Donahue ----- Lee

John Hart Fussell ----- Geneva

Alton R. Gissendanner ----- Dale

Thaddeus Lamar Glenn ----- South Carolina

Roy Howard Herron ----- Lee

Robert Russell Jeter ----- South Carolina

Judson Monroe Jowers ----- Elmore

Dorrance D. Major ----- Mississippi

Allen Jesse Miller ----- Clark

Bruce William Murray ----- Mobile

William Sumter Reynolds ----- Pike

James Ralph Sullivan ----- Montgomery

Fletcher Leroy Vinson ----- Lee

Everett Sompayrac Winters ----- South Carolina

SECOND YEAR.

John Howard Beckham	Hale
George Barney Bradshaw	Mississippi
William Lipscomb Douglass	Marengo
Robert Harper Hamner	Pickens
Everett Lee Harper	Pickens
McKenzie Heath	Coffee
Walter Hudson Hines	Monroe
John Bryant Jordan	Pickens
Clyve Valdez Presley	Butler
James Bennett Randall	Baldwin
James Daniel Ratchford	Chambers
Raymond R. Sally	South Carolina
R. O. Suddath	Georgia

FRESHMEN.

Marshall Reuben Bentley	Crenshaw
Benjamin Z. Burleson	Marion
Emis Augustus Davis	Georgia
Upshaw Franklin Gibson	Clay
James Warren May	Mobile
William Albert Neal	Jefferson
Frederick Davis Patterson, Jr.	Randolph

IRREGULAR STUDENTS.

William Posey Claughton	Chilton
Edward Pettus Lacy, Jr.	Dallas
Wilkie Hudson Lee	Lowndes
Sanford Grey Mayes	Greene
Frank Kirk Peterson	Dallas
Collis Deal Thompson	Pike

SUMMARY.

Graduate Students	9
Senior Class	99
Junior Class	95
Sophomore Class	168
Freshman Class	254
Pharmacy	20
Veterinary Medicine	44
Pre-Medical Course	18
Two-Year Course in Mining	1
Applied Electricity	14
Two-Year Course in Agriculture	26
Irregular Students	45
	<hr/> 793
Deduct for names counted twice	1
	<hr/> 792
Total	792

NUMBER OF STUDENTS IN EACH SUBJECT OF STUDY.

English -----	574	Mining Engineering -----	6
History -----	541	Architecture -----	18
International Law -----	205	Mechanical Drawing -----	263
Civics -----	24	Chemistry -----	463
French -----	44	Agronomy -----	162
German -----	17	Animal Husbandry -----	181
Spanish -----	64	Physics -----	271
Latin -----	43	Botany -----	137
Education -----	128	Entomology -----	36
Political Economy -----	30	Zoology -----	80
Mathematics -----	525	Horticulture -----	128
Chemical Laboratory -----	191	Forestry -----	15
Geology -----	74	Veterinary Medicine -----	44
Mineralogy -----	23	Landscape Gardening -----	57
Civil Engineering -----	52	Machine Design -----	77
Surveying -----	238	Descriptive Geometry -----	114
Electrical Engineering -----	179	Mechanic Arts -----	363
Radio Engineering -----	27	Pharmacy -----	20
Mechanical Engineering -----	235	Military (R. O. T. C.) -----	638

RESIDENCE BY STATES.

Alabama -----	652
Georgia -----	52
Florida -----	19
Mississippi -----	17
Tennessee -----	14
South Carolina -----	12
Louisiana -----	9
Texas -----	6
North Carolina -----	4
New Jersey -----	2
Arkansas -----	1
Kentucky -----	1
Massachusetts -----	1
Pennsylvania -----	1
West Virginia -----	1
Brazil -----	1
Mexico -----	1

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History	22
Horticulture	20
Mechanic Arts	14
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CATALOGUE
OF THE
ALABAMA
POLYTECHNIC INSTITUTE

STATE COLLEGE

FOR THE BENEFIT OF
AGRICULTURE AND THE MECHANIC ARTS

AUBURN, ALABAMA
1920

1920
POST PUBLISHING COMPANY
OPELIKA, ALA.

CALENDAR

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24	25	26	27	28	29	30		24	25	26	27	28	29	30	
31	--	--	--	--	--	--		--	--	--	--	--	--	--	
NOVEMBER								MAY							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
--	1	2	3	4	5	6		1	2	3	4	5	6	7	
7	8	9	10	11	12	13		8	9	10	11	12	13	14	
14	15	16	17	18	19	20		15	16	17	18	19	20	21	
21	22	23	24	25	26	27		22	23	24	25	26	27	28	
28	29	30	--	--	--	--		29	30	31	--	--	--	--	
DECEMBER								JUNE							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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5	6	7	8	9	10	11		5	6	7	8	9	10	11	
12	13	14	15	16	17	18		12	13	14	15	16	17	18	
19	20	21	22	23	24	25		19	20	21	22	23	24	25	
26	27	28	29	30	31	--		26	27	28	29	30	--	--	
JULY								JULY							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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3	4	5	6	7	8	9		3	4	5	6	7	8	9	
10	11	12	13	14	15	16		10	11	12	13	14	15	16	
17	18	19	20	21	22	23		17	18	19	20	21	22	23	
24	25	26	27	28	29	30		24	25	26	27	28	29	30	
31	--	--	--	--	--	--		31	--	--	--	--	--	--	
AUGUST								AUGUST							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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7	8	9	10	11	12	13		7	8	9	10	11	12	13	
14	15	16	17	18	19	20		14	15	16	17	18	19	20	
21	22	23	24	25	26	27		21	22	23	24	25	26	27	
28	29	30	31	--	--	--		28	29	30	31	--	--	--	
SEPTEMBER								SEPTEMBER							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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4	5	6	7	8	9	10		4	5	6	7	8	9	10	
11	12	13	14	15	16	17		11	12	13	14	15	16	17	
18	19	20	21	22	23	24		18	19	20	21	22	23	24	
25	26	27	28	29	30	--		25	26	27	28	29	30	--	
OCTOBER								OCTOBER							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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2	3	4	5	6	7	8		2	3	4	5	6	7	8	
9	10	11	12	13	14	15		9	10	11	12	13	14	15	
16	17	18	19	20	21	22		16	17	18	19	20	21	22	
23	24	25	26	27	28	29		23	24	25	26	27	28	29	
30	31	--	--	--	--	--		30	31	--	--	--	--	--	
NOVEMBER								NOVEMBER							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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6	7	8	9	10	11	12		6	7	8	9	10	11	12	
13	14	15	16	17	18	19		13	14	15	16	17	18	19	
20	21	22	23	24	25	26		20	21	22	23	24	25	26	
27	28	29	30	--	--	--		27	28	29	30	--	--	--	
DECEMBER								DECEMBER							
S	M	T	W	T	F	S		S	M	T	W	T	F	S	
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12	13	14	15	16	17	18		11	12	13	14	15	16	17	
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26	27	28	29	30	31	--		25	26	27	28	29	30	31	

COLLEGE CALENDAR 1920-1921.

Summer Session.....	June 7 to July 16, 1920
Examination for Admission Begins.....	Monday, Sept. 6, 1920
Session Begins.....	Wednesday, Sept. 8, 1920
First Term Begins.....	Wednesday, Sept. 8, 1920
Mid-Term Examinations.....	Oct. 18, 19, 20, 1920
Literary Society Celebration.....	Nov. 25, 1920
First Term Ends.....	Wednesday, Dec. 22, 1920
Second Term Begins.....	Tuesday, Jan. 4, 1921
Senior Class Exercises.....	Tuesday, Feb. 22, 1921
Literary Society Celebration.....	Tuesday, Feb. 22, 1921
Second Term Ends.....	March 20, 1921
Third Term Begins.....	March 21, 1921
Senior Theses Reported.....	Monday, May 2, 1921
Declamation Exercises.....	Monday, May 2, 1921
Field Day.....	Monday, May 2, 1921
Final Examinations Begin.....	Saturday, May 14, 1921
Junior Class Exercises.....	Saturday, May 28, 1921
Commencement Sermon.....	Sunday, May 29, 1921
Annual Meeting of Trustees.....	Monday, May 30, 1921
Alumni Day.....	Monday, May 30, 1921
Senior Class Orations.....	Monday, May 30, 1921
Festival of Lights, 8 P. M.....	Monday, May 30, 1921
Commencement Day.....	Tuesday, May 31, 1921

TRUSTEES

His Excellency, THOS. E. KILBY, President.....*Ex-Officio*
SPRIGT DOWELL, Superintendent of Education*Ex-Officio*

TERM EXPIRES 1923

W. F. FEAGIN (*Second District*).....Montgomery, Ala.
J. A. ROGERS (*Sixth District*).....Gainesville, Ala.
C. M. SHERROD (*Eighth District*).....Courtland, Ala.

TERM EXPIRES 1927

C. S. McDOWELL, JR. (*Third District*).....Eufaula, Ala.
W. K. TERRY (*Ninth District*).....Birmingham, Ala.
W. H. OATES (*First District*).....Mobile, Ala.
T. D. SAMFORD (*Third District*).....Opelika, Ala.
P. S. HALEY (*Tenth District*).....Oakman, Ala.

TERM EXPIRES 1931

H. D. MERRILL (*Fourth District*).....Anniston, Ala.
HARRY HERZFELD (*Fifth District*).....Alexander City, Ala.
OLIVER R. HOOD (*Seventh District*).....Gadsden, Ala.

B. L. SHI, *Secretary*.

FACULTY AND OFFICERS

(Arranged in groups in order of appointment.)

-
- 1 *CHARLES COLEMAN THACH, M. A., LL. D., President, Professor of Psychology and Economics.
 - 2 BENNETT BATTLE ROSS, M. S., LL. D., Acting President; Dean of the Faculty of Agricultural Sciences, Professor of General and Agricultural Chemistry, and State Chemist.
 - 3 GEORGE PETRIE, M. A., Ph D., Dean of Academic Faculty, Professor of History and Latin.
 - 4 JOHN JENKINS WILMORE, M. E., Dean of the Faculty of Engineering and Architecture, Professor of Mechanical Engineering and Director of Laboratories.
 - CHARLES ALLEN CARY, B. S., D. V. M., Dean of the Faculty of Veterinary Medicine, Professor of Physiology and Veterinary Science, and State Veterinarian.
 - 6 JOHN FREDERICK DUGGAR, M. S., Professor of Agronomy, Director of Experiment Station and Extension Service.
 - 7 ARTHUR ST. CHARLES DUNSTAN, M. E., C. E., Professor of Electrical Engineering.
 - 8 BOLLING HALL CRENSHAW, B. S., M. E., Professor of Mathematics.
 - 9 WARREN ELMER HINDS, Ph. D., Professor of Entomology.
 - 10 MICHAEL THOMAS FULLAN, M. E., Professor of Mechanical Drawing and Machine Design.
 - 11 CLIFFORD LE ROY HARE, M. S., M. A., Professor of Physical and Physiological Chemistry.
 - 12 †LUTHER NOBLE DUNCAN, M. S., Professor of School Agriculture and Superintendent of Junior and Home Economics Extension Department.
 - 13 WILLIAM WELCH HILL, E. E., Professor of Electrical Engineering.
 - 14 JOHN FREDERICK MESSICK, M. A., Ph. D., Professor of Mathematics.
 - 15 MICHAEL JOSEPH DONAHUE, A. B., Director and Professor of Physical Culture
 - 16 JAMES RICHARD RUTLAND, A. B., Professor of English.
 - 17 GEORGE STREATOR TEMPLETON, B. S., Professor of Animal Husbandry.
 - 18 LYNN STANFORD BLAKE, Ph. C., B. S., Professor of Pharmacy.
 - 19 THOMAS BRAGG, M. S., Professor of Analytical Chemistry.
 - 20 BERNER LEIGH SHI, C. E., Registrar.

*On leave from December 4th.

†In co-operation with United States Department of Agriculture.

- 21 MARION JACOB FUNCHESS, M. S., Professor of Agronomy.
- 22 ZEBULON JUDD, A. M., Director of the School of Education and of the Summer Session, and Professor of Education.
- 23 GEORGE LEO PELTIER, Ph. D., Professor of Plant Pathology.
- 24 FREDERICK CHILD BIGGIN, M. S., Professor of Architecture.
- 25 GEORGE COLUMBUS STARCHER, B. Agr., Professor of Horticulture and Forestry, and State Horticulturist.
- 26 WRIGHT AUSTIN GARDNER, M. A., Ph. D., Professor of Botany and Plant Physiology.
- 27 WILLIAM RAYMOND TAYLOR, A. M., Professor of English.
- 28 EMERSON R. MILLER, M. S., Ph. D., Professor of Chemistry and Research Chemist of the Experiment Station.
- 29 THOMAS P. ATKINSON, A. M., Professor of Modern Languages.
- 30 *JOHN A. C. CALLAN, M. C. E., A. M., Professor of Civil Engineering.
- 31 FRANK CLIFTON HULSE, Ph. B., Professor of Surveying.
- 32 ERNEST De ROY STIVERS, B. S., Professor of Agricultural Education.
- 33 ISAAC SPALDING, Captain, F. A., Commandant and Professor of Military Science and Tactics.
- 34 BENJAMIN ALLEN WOOTEN, E. E., A. M., Ph. D., Professor of Physics.
- 35 GORDON WORLEY, B. S., Professor of Practice Teaching.
- 36 MARK LOVEL NICHOLS, M. S., Professor of Agricultural Engineering.
- 37 CHARLES ALTON BAUGHMAN, B. S., C. E., Professor of Civil Engineering.
- 38 JAMES CLARENCE CONWAY PRICE, B. S., Associate Professor of Horticulture.
- 39 ISAAC SADLER McADORY, B. S., D. V. M., Assistant Professor of Veterinary Science.
- 40 ALBERT LEE THOMAS, M. E., Assistant Professor of Machine Design and Drawing.
- 41 PARKER PRESTON POWELL, M. S., Assistant Professor of Chemistry.
- 42 CHARLES ROBERT HIXON, M. E., Assistant Professor of Mechanical Engineering.
- 43 WILLIAM B. STOKES, M. E., Assistant Professor of Mechanical Engineering and Mathematics.
- 44 ROBERT STRATTON, A. M., Assistant Professor of Botany.
- 45 JESSE MATHEWS ROBINSON, M. A., Assistant Professor of Entomology and Zoology.
- 46 LOUIS JOSEPH FORTIER, B. E., First Lieutenant, F. A., Assistant Professor of Military Science and Tactics.

*On leave.

- 47 VERNON GRAY LOGGINS, A. B., A. M., Assistant Professor of English.
- 48 WILLIAM MICHENER, Captain, C. E., Assistant Professor of Military Science and Tactics.
- 49 H. E. FISCHER, First Lieutenant, Infantry, Assistant Professor of Military Science and Tactics.
- 50 CHARLES W. FERGUSON, D. V. M., M. D. C., Instructor in Veterinary Medicine and Infectious Diseases.
- 51 ALFRED WADE REYNOLDS, M. S., Instructor in History and Latin.
- 52 HERBERT MARSHALL MARTIN, M. S., Instructor in Chemistry.
- 53 FRANCIS WILLIAM BURNS, B. S., Instructor in Animal Husbandry.
- 54 JOHN EMMETT PITTS, B. S., E. E., Instructor in Mathematics.
- 55 GEORGE HENRY MARSH, M. S., Instructor in Chemistry and Food Chemist.
- 56 OSCAR LAFAYETTE MARTIN, B. S., Instructor in History.
- 57 WILLIAM CLOUSTON COOK, Instructor in Floriculture.
- 58 REDDING STANCILL SUGG, B. S., D. V. M., Instructor in Bacteriology, Histology and Pathology.
- 59 IRBY RHEUEL POLLARD, D. V. M., Instructor in Physiology, Obstetrics, and Therapeutics.
- 60 †OTTO BROWN, M. S., Instructor in Horticulture.
- 61 JAMES WALLACE TIDMORE, B. S., Instructor in Agronomy.
- 62 JAMES BURTON ALFORD, B. S., Instructor in Animal Husbandry.
- 63 LOUIS S. PHILLIPP, M. S., Instructor in Modern Languages.
- 64 †RICHMOND YOUNG BAILEY, B. S., Instructor in Vocational Agriculture.
- 65 KATE MEADE LANE, M. S., Assistant in History.
- 66 COLIN ERIC CARLOVITZ, B. S., Assistant in Chemistry.
- 67 ELISHA FREDERICK POLLARD, B. S., Assistant in Chemistry.
- 68 THOMAS BROWNING CHAMBERS, B. S., Assistant in Mathematics and Drawing.
- 69 PAUL REUBEN BIDEZ, Assistant Bandmaster and Analyst.
- 70 LYLE BROWN, Laboratory Assistant in Botany.
- 71 BERT NATHAN BRYAN, Laboratory Assistant in Zoology.
- 72 JAMES LAKE BUCHANAN, Laboratory Assistant in Mechanic Arts.
- 73 JOSEPH CHANDLER BURTON, R. O. T. C. Supply Officer.
- 74 FREDERICK WILLIAM CALHOUN, Assistant in Surveying.
- 75 GILES HOMER CARLOVITZ, Laboratory Assistant in Auto-Mechanics.
- 76 WILLIAM JEFFERSON CHRISTIAN, Laboratory Assistant in Auto-Mechanics.

†In co-operation with the Federal Board for Vocational Education.

- 77 JAMES EVANS COMBS, Laboratory Assistant in Auto-Mechanics.
 78 †ELVA LELAND COOPER, M. S., Assistant in English.
 79 JOHN FRANCIS COOPER, JR., Laboratory Assistant in Botany.
 80 RICHARD BUEY DEASON, Laboratory Assistant in Physics.
 81 STEWART HUBERT DENT, Laboratory Assistant in Physics.
 82 ANGUS MANCILL DOWLING, Laboratory Assistant in Drawing.
 83 ROSA DRAKE, Student Assistant in Library.
 84 CHARLES WESLEY EDWARDS, Student Assistant in History.
 85 CLAUD HAWKINS FUNDERBURG, Laboratory Assistant in Oxy-
 86 Acetylene Welding.
 87 SAMUEL GIDEON GARNER, Student Assistant in Library.
 88 †VERNER CYRIL HANNA, Assistant in Mathematics.
 89 MILTON OLIVER HOWLE, Laboratory Assistant in Mechanic Arts.
 90 HANSON STAKELY KELLER, Student Assistant in Chemistry.
 91 JOHN SIMMONS KERNACHAN, Assistant in English.
 92 WILLIAM DUKE KIMBROUGH, Laboratory Assistant in Botany.
 93 MILTON WINSHIP KYSER, Laboratory Assistant in Drawing.
 94 †ARTHUR ARMON LAUDERDALE, Assistant in Animal Husbandry.
 95 †LAMAR CANTELOU LEBRON, Assistant in Agricultural Engineer-
 ing.
 96 ELLIS PELHAM McDONALD, Laboratory Assistant in Mechanic
 Arts.
 97 VICTOR CARYL McILVAINE, Laboratory Assistant in Electrical
 Laboratory.
 98 JOE WHEELER MALONE, Laboratory Assistant in Zoology.
 99 CLAUDE WAINWRIGHT O'DONNELL, Laboratory Assistant in Ra-
 dio.
 100 WINFIELD SCOTT OWSLEY, Student Assistant in Pharmacy.
 101 MARVIN LUCIAN PERDUE, Assistant in Architecture.
 102 †RUSSELL SAGE REED, Assistant in Mathematics.
 103 EUEL A. SCREWS, Laboratory Assistant in Mechanic Arts.
 104 CLAUDE SIZEMORE, Laboratory Assistant in Mechanic Arts.
 105 WILLIAM PHILLIP SPRATLING, Assistant in Architecture.
 106 ALEX OGDEN TAYLOR, Field Work Assistant in Surveying.
 107 †DELPHINE FEMINEAR THOMAS, Assistant in English.
 108 EDWARD HOFFORD TODD, Laboratory Assistant in Chemistry.
 109 JOSEPH PIERCE TROTTER, Field Work Assistant in Surveying.
 110 ROY HOPE TURNER, Assistant in English.
 111 LYNN CASEY WATSON, Laboratory Assistant in Drawing.
 112 CARL ERIC WIDEBERG, Assistant to the Commandant.
 113 EDWARD EVERETT WILKINSON, Laboratory Assistant in Zoology.
 114 VESTER VANDERBILT WILLIAMS, Laboratory Assistant in Zoology.
 GEORGE RAYMOND WOOD, Laboratory Assistant in Physics.

†In co-operation with the Federal Board for Vocational Educa-
 tion.

CALVIN LOCKE YOUNG, Laboratory Assistant in Physics.

SARAH STEELE, Assistant to Registrar.

FLORENCE LOUISE TICHENOR, Secretary to the President.

EVERETT SOMPOYAC WINTERS, B. S., D. V. M., Lecturer on Anti-Hog-Cholera Serum.

GEORGE R. WHITE, M. D., D. V. S., Lecturer on Animal Restraint and Surgical Operations.

OFFICERS.

J. H. DRAKE, M. D., Surgeon.

M. A. GLENN, Treasurer.

JAMES BAXTER JACKSON, M. S., Analyst.

D. F. FOLGER, Secretary Young Men's Christian Association.

MARY E. MARTIN, Librarian.

COMMITTEES OF THE FACULTY

Committee on Discipline—Professors Wilmore, Dunstan, Bragg, Shi, Funchess, Judd, Fullan, Hill, Rutland.

Committee on Entrance Examinations—Professors Petrie, Crenshaw, Messick, Rutland, Shi.

Committee on Examination of Special Students—Professors Wilmore, Dunstan, Blake, Funchess.

Committee on Public Lectures—Professors Petrie, Atkinson, Shi.

Committee on Library—Professors Rutland, Atkinson, Duggar.

Committee on Athletics—Professors Hare, Dunstan, Crenshaw, Biggin, Martin, Funchess, Bragg.

Committee on Grounds and Buildings—Professors Wilmore, Starcher, Callan.

Committee on Alumni Appointments—Professors Shi, Petrie, Ross, Wilmore, Duggar.

STATION STAFF

C. C. THACH, President of the College.

J. F. DUGGAR, Director of Experiment Station.

AGRICULTURE:

J. F. Duggar, Agriculturist
E. F. Cauthen, Agriculturist
M. J. Funchess, Agronomist
J. T. Williamson, Superintendent Co-operative Experiments in Agriculture
H. B. Tisdale, Associate Plant Breeder
O. H. Sellers, Assistant
M. H. Pearson, Assistant

VETERINARY SCIENCE:

C. A. Cary, Veterinarian

CHEMISTRY:

B. B. Ross, Chemist
E. R. Miller, Chemist
Soils and Crops
C. L. Hare, Physiological Chemist

BOTANY:

W. A. Gardner, Botanist
Robert Stratton, Assistant

PLANT PATHOLOGY:

G. L. Peltier, Plant Pathologist
A. F. Thiel, Associate Plant Pathologist

HORTICULTURE:

G. C. Starcher, Horticulturist
J. C. C. Price, Associate
C. L. Isbell, Assistant

ENTOMOLOGY:

W. E. Hinds, Entomologist
F. L. Thomas, Assistant
J. M. Robinson, Assistant

ANIMAL HUSBANDRY:

G. S. Templeton, Animal Husbandman
E. Gibbens, Assistant
G. L. Burleson, Assistant
F. W. Burns, Assistant

EDITOR:

Leslie L. Gilbert

ORIGIN AND PURPOSE

The Alabama Polytechnic Institute is a distinctive school of science and its applications; being also the State College for the benefit of Agriculture and the Mechanic Arts, established by the State in 1872 by endowing it with the land-grant appropriation made by the United States Congress in 1862.

The leading object of the Institute, in conformity with the Act of Congress and the Acts of the State Legislature, is to teach the principles and applications of science.

In its courses of instruction it gives prominence to the sciences and their applications, especially to those that relate to agriculture and the mechanic arts; and at the same time the discipline and liberal education obtained by the study of languages and other sciences are not neglected.

All students are required to study the English language. The Latin, French, Spanish and German languages are also taught, and opportunity for their study is offered to students in any course.

The special and technical instruction given is thus based on a sound, general education.

In its different courses of education, work of great value to the youth of the State is accomplished by fitting them by a thorough science-discipline, in which manual training in the lower classes is made a prominent feature, for the successful and honorable performance of the responsible duties of life.

While every attention is given to the mental discipline of the students in endeavoring to train them to habits of accurate scientific thought, and thus to qualify them for the duties of life, their moral and Christian training will always constitute the prominent care and thought of the faculty. The Institute thus endeavors to educate as well as instruct, to form character as well as give information of value.

The Land-Grant Colleges of the United States were founded upon an Act of Congress, July 2, 1862, donating public lands to the several States, "For the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding military tactics, to teach such branches of learning as are related to agriculture and mechanic arts; for the liberal and practical education of the industrial classes in the several pursuits and professions of life."

The College at Auburn consists of three distinct, and well-nigh separate organizations, differing in this respect from the ordinary organization called "the College;" namely, (1) The College, (2) The Experiment Station, (3) Agricultural Extension Service.

I. THE COLLEGE

In the original organization of the College on the 20th day of March, 1872, the Board of Directors, keeping steadily in view the terms of the charter, established the departments (1) Scientific Agriculture; Animal Husbandry; Rural Agriculture, etc.; (2) Civil and Mining Engineering, Road Engineering, surveying, assaying, treatment of ores, and metallurgy; (3) Chemistry, agricultural chemistry, analytical chemistry,—the institution thus taking the lead of all Southern states in the establishment of these practical departments. This was a broad comprehensive interpretation of the purposes of the Morrill Act establishing the Land-Grant Colleges. It anticipated many of the subjects of instruction that have only recently been formulated. (4) In 1885, with increase in income, the first department of manual training and mechanic arts of the South was established. (5) In 1889 was established one of the first departments of Biology, the first professor becoming later the head of the great department of Biology of Cornell University. (6) In 1891, the first department of electrical engineering, and (7) in 1905, the first department of telephone engineering was established. (8) In 1907, the first department of architecture was established. (9) In 1884 the college in order to still further limit its activities more strictly and technically to the leading object of its creation and to exclude itself absolutely from any province of educational work given in the state, abandoned the time-honored course and degree of Bachelor of Arts, since which time it has conferred only one baccalaureate degree, that of Bachelor of Science. The renunciation was a supreme break with the old exclusive classical curriculum.

The work of the college is now largely devoted to the study of the *natural sciences and their application to practical life*. This scientific and practical education is based upon a sound and thorough education in history, language and mathematics. The proportion of these two elements in education has been the constant study of the institution since its foundation in 1872, and the success of its graduates attests the sound wisdom of its policy and practice.

ORGANIZATION

The instruction offered by the College is arranged in six divisions: (1) College of Engineering and Architecture, (2) College of Agricultural Sciences, (3) Academic Departments, (4) College of Veterinary Medicine, (5) Department of Pharmacy, (6) School of Education. Students in the different divisions of the college receive instruction in other depart-

ments as shown in the courses of study prescribed for degrees.

I. The College of Engineering and Architecture includes the following departments: (1) Civil Engineering, (2) Electrical Engineering, (3) Mechanical Engineering, (4) Chemical Engineering, (5) Chemistry and Metallurgy, (6) Architecture, (7) Architectural Engineering, (8) Mechanical Drawing and Machine Design, (9) Highway Engineering.

II. The work in the Agricultural College is divided into the following groups: (1) Agronomy (field crops, cotton, corn, soils, etc.), (2) Animal Husbandry, (3) Horticulture, (4) Veterinary Science, (5) Botany, (6) Entomology, (7) Agricultural Chemistry, (8) Plant Pathology, (9) Agricultural Engineering.

III. A general course is offered in the following subjects: Education, economics, English, history, Latin, modern languages, mathematics, physics, chemistry, botany, drawing, mechanic arts, military science and tactics.

IV. The College of Veterinary Medicine comprises the following departments: Veterinary medicine, physiology, surgery, anatomy, therapeutics, pathology, histology, bacteriology, obstetrics, infectious diseases, meat inspection, milk inspection, and animal parasites.

V. The Department of Pharmacy offers three degree courses as follows: four-year course (B. S.); three-year course (Ph. C.); two-year course (Ph. G.).

VI. The School of Education offers courses which lead to the degree, Bachelor of Science in Agricultural Education and Bachelor of Science in Education.

II. EXPERIMENT STATION

The institution is not only an educational organization, but also a research and extension organization whose function is (1) to study the problems of every phase of farm life, and (2) to convey needed information as effectively as possible to those who live on the soil.

As has been well said, "Experience of a few years demonstrates that but little appreciable benefit could accrue to the agriculture of the state by educating only the limited number of young men attending agricultural colleges, but that to benefit agriculture by the application of modern sciences, there should be provision made for the scientific investigation and research in subjects relating thereto, results of which should be distributed to those directly engaged in farming."

Hence, in 1887 Congress passed an Act establishing, in connection with these agricultural colleges, experiment stations, and there has been universal recognition by the farming interests throughout the state and the nation of the highly benefi-

cial results and direct practical value of experiments conducted through the Alabama Experiment Station.

The testing and breeding of seeds (cotton, corn, oats and all staple crops), the testing of fertilizers under thousands of varying conditions, the analysis of commercial fertilizers, the promotion of profitable production of beef, pork, poultry and sheep, the conservation of soils, improved methods of cultivation, drainage, the use of improved farm implements, the organization of farmers' institutes, boys' and girls' farm and garden clubs—this incomplete catalogue of a few of the leading activities of the experiment station indicates the tremendous range and value of the work.

III. AGRICULTURAL EXTENSION WORK

The chief means by which this agricultural work has been conducted and by which the benefits of experiment work are carried to the farmer, has been the appropriations made under the title of Local Experiment or Boll Weevil Act. Under this act popular experiments which are being conducted throughout the state in agriculture, drainage, horticulture and the raising of hogs, cattle, etc., are made of direct practical value to the farmer. Experiments in the value of fertilizers, tests of the varieties of cotton, corn, oats, alfalfa, etc., have been made in sixty-seven counties of the state under the most careful supervision, and thus affording highly valuable results according to local conditions of soil, climate, humidity, etc.

THE SMITH-LEVER LAW

It is difficult to overstate the value of this Federal Law. Funds derived therefrom, together with state funds to match it dollar for dollar, are the most productive investment made by the state and the nation. The percentage increase of production under demonstration methods over production of the average farmer of Alabama is 155 per cent. This simple figure in a nutshell contains the story of the possibilities of the agricultural production in Alabama under the best inspiration and guidance.

BOYS' CORN CLUBS AND GIRLS' CANNING CLUBS

This highly important department, organized July 1st, 1909, at present extends its benign influence into nearly every country home in Alabama. The state of Alabama, all outdoors, is, as it were, the schoolhouse of this form of education. This mighty army of boys and girls constitutes a most promising student body. Perhaps the paramount good of this work is the great interest aroused on the part of the young people of the country in the production and conservation of crops. The

point of view of these thousands of young people is entirely changed from the side of the town to the side of the country. Country life is thus organized and the possibilities of scientific farming emphasized. By the organization of this elementary form of production, the young people of Alabama are becoming more and more organized in all forms of rural life—in social and financial co-operation, marketing, etc., as well as, the production of crops.

FACILITIES FOR INSTRUCTION

The Institute possesses facilities for giving laboratory instruction in history, Latin and the departments of applied science.

COLLEGE OF ENGINEERING AND ARCHITECTURE

I. Civil Engineering.—The department of civil engineering is located in Broun Hall and occupies two lecture rooms, a drafting room, an office, an instrument room and a road materials laboratory. It is equipped with transits, levels, plane tables and other instruments necessary for giving field practice in the several branches of surveying.

A very complete camping outfit consisting of tents, cots, stools and kitchen and mess tent outfit, is available for use in the summer camp and school of surveying.

The drafting room is spacious and well lighted, and is equipped with well appointed drawing desks, tables, filing cases, models of bridges and roofs, and a large number of blue prints donated by various bridge companies for study and comparison by students in bridge and structural design.

In practical hydraulics, the college water works system, including pipe lines, pumps, stand pipe, bored wells with air lifts, fire hose and nozzles, etc., are available for use of the students; and the students also determine the flow in several natural streams with aid of current meters and weirs. There is a number of large and small hydro-electric plants relatively near Auburn, and visits of inspection are made by students to these plants.

II. Highway Engineering.—The department of highway engineering is located in Broun Hall, with a lecture and recitation room, an office and laboratory for the testing of non-bituminous materials used in road building. Facilities are being provided for testing the bituminous materials of road building. The work of this department is so closely related to that of the other engineering departments that practically all the drawing room and laboratory facilities of the civil and mechanical departments are suitable and available for students in highway engineering.

III. Electrical Engineering.—In the engineering building four rooms and two offices are used by the department of electrical engineering. Two rooms are class rooms, another is used for the telephone laboratory, and the fourth is a laboratory for electrical measurements.

The wiring in this building is arranged so that alternating

and direct current of various voltages for power, lighting, and experimental purposes can be delivered to any room.

In connection with the laboratories there is installed a repair and construction shop furnished with a variety of hand tools and with power driven machine tools.

A large amount of electrical testing and measuring apparatus as well as commercial machinery has recently been installed in the laboratories.

(a) The electrical measurement laboratory is furnished with a variety of resistance boxes, bridges, galvanometers, standard cells, condensers, etc., as well as two photometers. In addition to the laboratory instruments proper, just noted, the department is provided with representatives of most of the types of commercial ammeters, voltmeters, and indicating and recording wattmeters for A. C. and D. C. work. There is also a 30,000 volt transformer and break-down tests of insulating materials.

(b) The telephone laboratory is provided with a full line of telephonic apparatus, telephones, relays, condensers, plugs, jacks, lamp and other signals, etc., representative of the Bell and a number of independent telephone companies.

Single pieces are so mounted that they can be connected up in any desired manner and thus the connections of any particular system can be made up and tested out.

Twenty cells of Edison storage battery are used to furnish energy for a board equipped for common battery and magneto service with trunking circuits. This board is a standard 100 line board equipped with one strip of twenty answering and multiple jacks, ringing, listening keys, and cord signals for four cords.

(c) The laboratory is equipped with a large number of D. C. and A. C. generators, motors, and other appliances especially adapted for experimental work. In addition the equipment of the power plant is so arranged as to be readily available for purposes of instruction and investigation.

The machines for experimental work are arranged on testing platforms rendering them readily accessible. By means of a comprehensive wiring layout with individual connection boards for each machine, a wide variety of combinations of machines can easily be made.

IV. Mechanical Engineering.—The laboratory work is considered an important part of the course and is arranged as far as possible to illustrate and supplement the work as carried on in the class room.

The steam and heat engineering laboratory is located on the first floor of Broun Hall, and the following apparatus is available for instruction: A 35-horse power cross compound engine,

especially arranged for experimental work; a surface condenser with air and circulation pumps attached; a 20-horse power slide valve engine; an electric headlight engine; a 15-horse power steam turbine; steam pumps, hot and cold water meters, tanks, scales, indicators, calorimeters, thermometers, pycometers, steam gauges and apparatus for testing steam gauges.

In the line of internal combustion engineering the following apparatus is available for instruction purposes: A 12-horse power four stroke cycle engine using gasoline or kerosene, a 4½-horse power four stroke cycle kerosene engine, a 2½-horse power kerosene engine, a 2-horse power two stroke cycle gasoline engine, an Ericsson hot air engine, a motor driven air compressor with motor, a volume blower, and the necessary tanks, scales, indicators and other auxiliary apparatus necessary for making tests.

A refrigerating plant of 2½ tons capacity, including ammonia condenser and cooling coils, brine circulating system, pumps, meters, weighing scales and all apparatus needed for a study of the refrigerating cycle. The plant is driven by a steam engine, and provision is made to measure the power delivered and steam consumption of the engine.

The equipment of the power house is also available for instruction, and consists of the following: 160-horse power angle compound engine; a 200-horse power water tube boiler; a 100-horse power water tube boiler, two locomotive air pumps.

Another room on the first floor of Broun Hall has been fitted up for laboratory for testing materials. In it are installed a Riehle testing machine arranged for making transverse, compression and tension tests, and micrometer apparatus for measuring the deformation of the specimen under test, and an Olsen torsion testing machine with auxiliary apparatus. There is also provided a cement testing outfit consisting of a testing machine, sieves, briquette molds, boiler, and other apparatus for testing the strength, setting properties, fineness, and specific gravity of cement.

On the second floor of Broun Hall is located a laboratory for testing fuels, furnace and illuminating gases, and lubricants. The present equipment consists of a Mahler bomb calorimeter and a Parr calorimeter, for determining the heating value of fuels, complete apparatus for collecting and testing flue and furnace gases, apparatus for determining viscosity, the specific gravity, flash point, the coefficient of friction, and other properties of lubricating oils. A small electric motor furnishes power for grinding samples, driving blower for air blast, stirring, and other such work.

V. *Mechanic Arts*.—Shop courses are given to all able bodied students in the freshman class, and to sophomores and juniors in certain engineering courses. The work is executed from drawings and the purpose is not to teach a trade, but to train the eye, the hand, and the mind to more perfect co-operation, a training which will be of value in any pursuit in life. This training involves the principles at the foundation of all trades and is of special value to a student who wishes afterward to learn a trade.

The carpenter shop and pattern shop are equipped with benches, machines, and tools to accommodate sections of thirty students. The forge shop is equipped with blower and exhaust fan, punch and shear, grinder, drill, forges, anvils and tools for classes of twenty students. The machine shop is supplied with lathes, milling machines, planers, shaper, drills, grinders, and special tools and fixtures. It is also provided with benches fitted with vises for hand work in metals.

VI. *Mineralogy*.—In the mineralogical laboratory there are accommodations for thirty-six. Each student is supplied with drawer, locker, and the necessary equipment for studies in crystallography, mineralogy and lithology. In the exhibit room adjoining is maintained a good type collection of minerals and lithological specimens as well as working specimens. There is also a collection of fossils and casts illustrating historical geology. Other equipment of the geological department consists of wooden, transparent, and skeleton crystal models; specific gravity balances; contact and reflecting goniometers; a photographic microscope and slides for both microscope and stereopticon lanterns.

VII. *Metallurgy*.—The concentrating plant consists of a gyratory crusher, two sets of roll crushers, two bucket elevators, four trommels or revolving screens, two classifiers, four Hartz jigs and a seven-foot Wilfley concentrating table.

The stamp mill is of full size Nissen type, circular discharge and interior amalgamating plate. The outside amalgamating plate is full size, being ten feet long. The stamp mill and concentrating plant are fed from their respective bins by two different types of automatic feed. The ore before entering the bin is crushed to proper size by a Blake jaw crusher. The model cyanide plant illustrates the leaching department of the cyanide process and the extractor box work. It consists of one solution tank, two sand tanks, with false bottoms and filters, one gold tank, and a set of extractor box compartments of the up-flow type.

VIII. *Mechanical Drawing and Machine Design*.—The department of mechanical drawing and machine design is supplied

with equipment for teaching mechanical drawing, descriptive geometry, kinematics and machine design.

A convenient cabinet is supplied with a complete set of Schroeder's descriptive geometry models for demonstrating the principles of descriptive geometry and mechanical drawing. A small reference library and a library of selected catalogues of manufacturers, which is being established for the use of students in advanced machine design, occupy a suitable case. A Beck vertical wall file, 36 x 48 inches, for filing commercial blue prints, is filled with selected blue prints furnished by prominent manufacturers, and is made use of by students in machine design.

A number of kinematic models and a large collection of engineering specialties, sectioned to show interior, which were donated by the various manufacturers, occupy a sectional case, and are used in elementary work in machine design and mechanical drawing. The filing envelopes, which contain the students' drawings are kept in alphabetical arrangement in a case of drawers.

This department is equipped with an outfit for making blue prints, consisting of two sun printing frames 18 x 24 inches and 30 x 42 inches, each mounted on a car and track and suitable conveniences for washing and drying the prints.

All students in the lower classes are required to take drawing, a study of which tends to discipline the mind as well as to train the eye and hand to accuracy of observation and execution. Four large well-lighted drawing rooms which will accommodate (at one period) two hundred and fifty students, are provided with tables, lock boxes, etc. The drawing rooms have been equipped with one hundred and fifty new drawing tables of the most modern pattern.

Visual Instruction: A bureau of visual instruction is operated in connection with the work of the department of machine design and drawing. The bureau is in co-operation with the extension service of the department of agriculture of the college. It serves as a distributing center for lantern slides and motion picture films of educational objects. In addition to this, the bureau prepares slides, photographs, charts, and diagrams needed by the several departments of the college for educational illustration.

The bureau acts as curator of the college educational exhibit which is located in the engineering department in Broun Hall. The exhibit consists of a display apparatus including an autostereopticon, multiplex panels, framed photographs, and specimens of work of the technological and academic branches. The activities of the college in military and athletics are

shown by means of photographs taken during the progress of these features.

IX. Architecture.—The department of architecture is provided with four well-lighted rooms in the Main Building. The drafting room is open from 8:00 A. M. to 10:00 P. M., and each student has his own table to which he may come at any time, and a steel locker for materials; members of all classes are together in this room, and the younger men find inspiration in the work of the older ones. The studio for freehand drawing and water color painting is furnished with adjustable tables and a good collection of models and plaster casts of sculpture and architectural details.

The architectural library is conveniently located with respect to other rooms of the department, and the books, journals, and drawings are freely accessible to students during working hours; under proper restrictions books may also be taken out for home use. The equipment of the lecture room includes a lantern and a carefully selected collection of slides. Quarters for clay modeling are fitted out in Broun Hall.

For advanced work in construction the department of architecture has at its disposal the resources of the various engineering laboratories. In the civil engineering testing laboratory the student investigates the properties of materials, such as cement, stone, brick and steel; in the mechanical laboratory he becomes acquainted with the processes involved in the heating and ventilation of buildings, and the operation of steam and gas engines; in the electrical laboratory he gains a knowledge of dynamo electric machinery, and methods of wiring and illumination of buildings.

On file in the office of the department is a growing collection of working drawings and specifications contributed by practicing architects. A practically permanent display of rendered drawings is maintained on the walls, student problems in design being hung as completed for purposes of inspection and criticism.

COLLEGE OF AGRICULTURAL SCIENCES.

X. Practical Chemistry.—The chemical apparatus recently purchased for the chemical laboratory consists of a full supply of the most improved instruments for practical work and investigation. The building is supplied with water and gas and every appliance required to meet the demands of modern scientific instruction and research. In addition to the apparatus usually supplied to the first class laboratories, there have been imported a new and improved Schmidt and Heinsch's polariscope, ten short-arm balances of latest pattern, Bunsen's

spectroscope, Abbe refractometer, and other instruments for delicate and accurate work.

The investigations that are undertaken in this laboratory by scientific experts in connection with the work of the agricultural experiment station, are of special value to advanced students, and afford them unusual opportunities to learn the methods of scientific research.

The building contains a large general laboratory that accommodates eighty students, a special laboratory for seniors that will accommodate forty students, a lecture room with a capacity of one hundred and fifty seats, and nine other rooms, all appropriated to instruction and research in chemistry. There is an annex with laboratory facilities for twenty-four students.

The State chemical laboratory for the official analysis of fertilizers is connected with this department.

XI. Agriculture.—The agricultural experiment station established in connection with the Institute, where experiments and scientific investigations relating to agriculture are daily made, affords unusual opportunities to students to become familiar with agriculture, its defects and remedies.

The students of agriculture accompany the professors in the field where lectures are delivered in the presence of the subjects discussed, and during the year exercises in practical agriculture of an educational character are given the students who enter upon this course of study.

The farm contains 304 acres.

XII. Botany.—The department of Botany occupies the western half of the third floor of Agricultural Hall. The rooms in use include a lecture room having seats for sixty-four students a general laboratory accommodating forty-five students, a smaller laboratory for bacteriology and pathology accommodating twenty students, two small laboratories for professors and advanced students, two offices, a dark room, and store room. The general laboratory is supplied with microscopes, glassware, and the general equipment of apparatus and materials necessary for gross and microscopic work in plant morphology. The equipment for work in plant physiology and pathology has been very materially increased by the installation of much new apparatus needed for quantitative work in these subjects. These additions include autoclaves, sterilizers, incubator, drying oven, automatic water still, constant temperature baths, and ovens, Kjeldahl nitrogen determination apparatus, distilling and extraction apparatus, and many smaller pieces. These accessions to the equipment provide facilities for accurate work, under controlled conditions, in the chemical phase of plant physiology and for cultural

studies in bacteriology and plant pathology and permit expansion and development of the courses offered in these subjects to a degree commensurate with their importance.

The greenhouse of the department has a floor space 30 x 110 feet, with an adjoining laboratory room 30 x 30 feet. It is used for experimental work in plant pathology and plant physiology. The facilities provided are sufficient to permit the growth of ample material for class use in these subjects as well as for the investigation of special problems by the staff.

The botanic garden contains a fairly representative collection of the native trees and shrubs of the state, and it is planned to make a collection of native medicinal plants. A portion of the garden will also be used as an outdoor experimental plot for the growing of materials employed in the work of instruction or in research.

XIII. Pharmacy—The laboratory of this department occupies the first and second floors of the annex to the chemical laboratory, and is provided with a sufficient supply of drugs and apparatus necessary for instruction in pharmaceutical preparations. The equipment for the laboratory includes a Laurent Polariscope, a Pulfrich refractometer, a vacuum distilling and drying apparatus, consisting of $\frac{1}{2}$ horse power air pump vacuum chamber, condenser, and Bruhl receiver for fractional distillation under diminished pressure, a three-horse power electric motor, a complete outfit for organic combustion work, and three chemical balances.

On the third floor is located the lecture room, storeroom, and drug mill room.

The new pharmaceutical laboratory on the basement floor of the pharmaceutical building is fitted with steam and has a full equipment for research work in pharmaceutical chemistry.

The students work in the laboratory with the professor from five to eight hours, six days in the week.

XIV. Horticulture.—A well-lighted and heated one-story brick building adjoins the greenhouse. It affords space for about twenty students at one time for practical work. The two greenhouses, 20 x 80 feet are modern in construction. They contain a varied collection of the leading bedding and decorative plants, and afford facilities for practical instruction in plant propagation, the forcing of vegetables and flowers, and greenhouse management. Hot beds and cold frames of cement construction are also at hand. Instructors also make use of the experimental orchards, vineyard, garden, and ornamental plantings on the grounds of the department for practical instructions. Accurate experiments in the culture of various fruits and vegetables adapted to the state.

are constantly in progress. The departmental library embracing many of the standard works, magazines, bulletins and other equipment are accessible to advanced students under the usual regulations.

XV. *Entomology, Zoology*.—The department for teaching these subjects is located on the first floor of Comer Hall. A combined lecture and laboratory room provides accommodation for 70 men at a lecture or 25 in laboratory work. It is well equipped with apparatus for microscopic and dissection work, and to supplement this, charts, models and preserved specimens of invertebrate animals are used.

In addition the course in Entomology has at hand in the station laboratory, adjoining the class room, a valuable and growing collection of insects especially of the economic species of Alabama. In connection with the range of greenhouses there is also a large workroom for experimental and demonstrational work with insecticides and an insectary 16 x 40 feet within which the study of insect problems may be conducted at any time under controllable conditions. This room is also used in connection with the college apiary to demonstrate equipment and apparatus as used in modern bee-keeping, a part of the course in Entomology. The farm orchards, vineyards and truck gardens afford a convenient opportunity for the observation, study and control of such economic pests as may occur therein. The student in Entomology is made familiar with several types of hand and power spraying and dusting apparatus, also spraying accessories which are recognized as essential in successful agriculture.

A reference library, containing general and standard works upon entomology and zoology and publications of the government and State experiment stations is accessible to students.

XVI. *Animal Husbandry*.—The Animal Husbandry Farm contains about 260 acres. Pure bred herds of Angus, Hereford, Shorthorn, and Jersey cattle, Berkshire, Duroc-Jersey, and Poland China hogs, a Percheron Stallion, Southdown sheep, and several teams of work mules are kept on this farm for experimental work, and for use in instructing the college students. The students visit the Animal Husbandry farm with their instructors for instruction in judging, feeding, and management of the various classes of live stock. During the junior and senior years the students make trips to several of the best live stock farms in the State to study the different types of animals kept on the farms and the live stock problems of the breeders. The students are also required to make trips during the senior year to live stock shows and attend some of the leading live stock sales in the State.

ACADEMIC WORK

XVII. History.—All advanced work in history is conducted by the laboratory method. This plan has been successfully employed in the junior, the senior, and the graduate classes. A large and well-lighted room has been set apart for this work and the resources of the rapidly growing library are easily accessible. This room is equipped with maps, diagrams, charts and suitable tables and chairs. The library is a depository for all government publications. These and other books on American history, with which it is well supplied, offer abundant material for research work in the history of our country. The publications collected by the experiment station constitute valuable material for study in industrial history.

XVIII. The physical laboratory occupies the four rooms in the south end of the basement of the Academic Building. That part of the laboratory which is used in routine laboratory instruction is well equipped for work in general physics, its equipment comprising measuring instruments of various kinds and instruments for work in heat, light and electricity. The other part of the laboratory is used for more advanced work and it is equipped with various instruments of precision. At present an interesting research in the spectroscopy of light from the electric arc is being pursued.

XIX. Military Tactics.—This department is supplied with rifles and full equipment for instruction in the Field Artillery, Engineer, and Infantry units of the Reserve Officers' Training Corps, which are maintained in accordance with the National Defense Act of 1916.

Laboratory facilities are provided for disassembling and study of American, British, and French types of artillery. Outdoor gallery rifle and pistol ranges are provided on the campus for target practice instruction in small arms. A smoke-bomb range is available for advanced field artillery instruction. The college farm affords ample terrain for practical instruction in draft and driving animals, and handling trucks, tractors, automobiles, and motorcycles.

COLLEGE OF VETERINARY MEDICINE

XX. Physiology and Veterinary Science.—The veterinary department occupies a separate two-story building with nine rooms. It is provided with lecture room, office, working and operating rooms for clinical practice, thoroughly equipped laboratories for work in bacteriology, milk and meat inspection, and with museum containing skeletons of the domestic

animals for instruction. Free clinics are given every Saturday for the benefit of the students in veterinary science.

There is a separate dissecting room with cement floor and north roof light, constructed especially for this department. This laboratory is used by the professor and students each afternoon for three months.

BUILDINGS.

The Main Building is 160 x 71 feet, and contains forty-five rooms. It contains lecture rooms, administration offices, physical laboratory, museum, armory, etc.

LANGDON HALL

This is a two-story building 90 x 50 feet. The second story is the audience hall, used for commencement and other public occasions.

POWER HOUSE AND SHOPS

The carpentry shop is located in the first story of Langdon Hall. A two-story brick building known as the power house provides accommodations for the power plant and electric switch board equipment on the first floor, and the pattern shop on the second floor. A one-story wing to this building houses the dynamo laboratory. The forge shop and machine shop are installed in separate one-story buildings. A commodious boiler house of fire proof construction is located adjacent to the power house.

BROUN ENGINEERING HALL.

The William LeRoy Broun Engineering Hall is 250 feet long, 50 to 90 feet deep, and three and four stories in height, enclosing a floor area of 43,500 square feet. In construction this building conforms in general to the other buildings on the campus. The walls are laid up in selected red brick, with limestone and terra cotta trimmings.

Offices, lecture rooms, and laboratories for the departments of mechanical, electrical, and civil engineering and machine design and drawing, are located within this building, and all the interior accommodations are especially arranged to facilitate the special work of each department.

This building was designed and superintended by the department of architecture.

CHEMICAL LABORATORY.

The Chemical Laboratory is a two-story structure, 40 x 60 feet, with a rear projection, 35 x 60 feet, of one-story and basement, and contains eight rooms. The exterior is of pressed brick with cut stone trimmings and extra terra cotta ornamentations.

The chemical laboratory for the agricultural experiment station occupies a building 60 x 26 feet, and is appropriated exclusively for chemical investigation and research.

PHARMACY BUILDING.

This is a three-story brick building containing rooms and laboratories for the department of pharmacy.

SMITH HALL.

The Otis D. Smith Dining Hall, constructed of stone and pressed brick, is two stories in height, and one hundred and forty feet in length. It will accommodate three hundred in the dining hall, and forty in the dormitory above. The style is semi-colonial.

CARNEGIE LIBRARY.

The library building is a handsome structure of classical outline, monumental in its general effect.

AGRICULTURAL BUILDING.

A handsome and commodious building is occupied by the departments of (1) agronomy, (2) horticulture, (3) botany, (4) entomology, (5) animal husbandry, and (6) agricultural engineering, together with a separate set of buildings for practical work in each of these departments. The building is three stories in height and is constructed of pressed brick with stone trimmings.

ALUMNI GYMNASIUM.

The central unit of the Gymnasium presented to the College by the alumni was dedicated February 22nd, 1916. It is an attractive three-story structure, 110 x 60 feet, built of brick and stone. The first floor contains the dressing rooms and showers for the athletic teams, the students' lockers and showers being located on the second floor. The main gymnasium hall is on the third floor.

REQUIREMENTS FOR ADMISSION

All applicants for entrance to any department of the College should make application to the Registrar who will supply the necessary blanks for high school credits. Those who desire to be admitted by certificate should make application as soon as possible after their graduation from the High School.

All applicants for admission must present testimonials of good moral character and those who come from other colleges must bring certificates of honorable discharge or furnish other testimonials of good moral character.

The next session begins Wednesday, September 8th, and classification of new students begins on Monday, September 6th. Entrance examinations will be required of all new students except those who present certificates from accredited high schools or from colleges or universities.

REGISTRATION.

New students upon their arrival in Auburn should report promptly to Dean Petrie for classification.

All students are required to register in the Registrar's office on the first day of the session and on the opening day after the Christmas vacation. Registration at a later date involves additional administrative work to the College and seriously affects the work of the student. An additional fee of \$2.00 will be charged for registration after September 11th and January 4th. No exception will be made to this regulation.

ENTRANCE REQUIREMENTS.

For unconditional admission to the freshman class and to the pharmacy and pre-medical courses, a student will be required to present fifteen entrance units. These must include:

English3 units
Mathematics:

Engineering, General, B. S. Pharmacy, and Pre-

Medical courses3 units

All other courses2½ units

Latin:

For students who take Latin in college except

Pharmaceutical Latin3 units

Applicants who have not the full entrance requirements may be admitted as conditioned students, provided their deficiencies do not exceed two units. The remaining two units must be removed by the junior year. Their credits, however must include the following:

English	3	units
Mathematics:		
For admission to Engineering, General, B. S.		
Pharmacy, and Pre-Medical courses	2½	units
For all other courses	2	units
Latin:		
For students who wish to take Latin in College,		
except Pharmaceutical Latin	3	units

ENTRANCE SUBJECTS.

A unit is defined as a high school or preparatory course of five periods of forty to forty-five minutes each, weekly, throughout the academic year of nine months. In science courses, two laboratory periods are counted as the equivalent of one recitation period. No more than four units will be given for one year's work in the high school.

Credit for admission will be given for any high school subject properly taught.

The following is the maximum number of units in each subject that will be acceptable as of unit valuation:

English	4	units
Algebra	2	units
Plane Geometry	1	unit
Solid Geometry	½	unit
Trigonometry	½	unit
Social Sciences (history, civics and economics.)	4	units
Chemistry	1	unit
General Science	1	unit
Biology	1	unit
Modern Languages	2	units
Latin	4	units
Music	2	units
Free Hand Drawing	2	units
Mechanical Drawing	2	units
Industrial Arts	2	units
Household Arts	2	units
Agriculture	2	units

ADMISSION BY CERTIFICATE.

1. From accredited schools: Applicants from accredited schools will be admitted on presentation of official certificates covering the entrance requirements.

A list of accredited schools in Alabama is printed at the end of this catalogue. A student from any other state will be admitted by certificate only if his school is accredited by the University of the State. Not more than four units will be given

for one year's school work, and not more than one unit will be given for work done in any six weeks' summer school. All students are strongly advised to complete the full course given in their schools before applying for admission to college.

2. From non-accredited schools: From non-accredited schools certificates covering the entrance requirements may be accepted, provided the applicant stand satisfactory examinations in the following subjects:

For full admission:

(1) Rhetoric and Composition	1	unit
(2) English Classics	1	unit
(3) Algebra	1½	unit
(4) Plane Geometry	1	unit
(5) Fourth year English	1	unit
(6) One other fourth year subject	1	unit

For conditioned admission (5) and (6) will not be required.

ADMISSION BY EXAMINATION.

Applicants without satisfactory certificates as set forth above must stand examinations on 15 units for full admission (including the *required* subjects) or 13 units for conditioned admission (including the *required* subjects).

ADMISSION FROM OTHER COLLEGES.

Students coming from another college of similar rank will be assigned to the class and course to which they would belong in the institution which they have left, and will be required to make up only such back work as is necessary in order to carry on the regular studies of their class. In case they enter any other course they will be required to make up all work that they have not had.

Applicants for the B. S. degree must take the senior year's work in this institution.

ADVANCED STANDING.

Advanced standing or college credit is not given in any subject on high school credits. Advanced standing will be given for work done in other colleges of similar rank, or in other specially approved institutions.

SPECIAL STUDENTS.

Mature students who are not able to meet the regular entrance requirements may be admitted to special courses in agriculture, architecture, engineering, chemistry, pharmacy, etc., and will be classified as special students, provided they

are prepared to do satisfactory work in the subjects which they desire to take.

No one will be admitted as a special student unless he is twenty years of age. No special student will be admitted to a course in English unless he has three entrance units on that subject or to a course in mathematics unless he has entrance credit for two and one half units in mathematics taken from algebra, plane and solid geometry. These entrance credits must be from an accredited school or by examination. Special students may become regular students only by presenting satisfactory entrance requirements.

NUMBER OF EXERCISES REQUIRED.

All students are required to have not less than eighteen credit hours per week. Students shall not be permitted to take more than three hours of extra work without special permission of the faculty.

CHANGE IN COURSE.

Students who change from one regular course to another will be required to make up satisfactorily to the head of the departments concerned all the work in the new course that they have not had. Permission to change from one course to another will be granted only at the beginning of terms except in very urgent cases.

COURSES FOR WOMEN.

With the entry of women into new professions and vocations under modern social conditions, it has seemed an obligation upon the College to make provision for women in the various professional and technical courses, as well as in the academic course of the college, and to make special provision for housing women students.

NEW PROFESSIONS AND OCCUPATIONS FOR WOMEN.

High School Teaching.—Under conditions brought about by the war, women are being called in larger and larger numbers into teaching positions in high schools. Under modern industrial conditions the high school courses of study have undergone marked changes. The old type academic college no longer furnishes adequate training for all high school teachers. It was in large measure due to the recognition of this latter fact that the department of education of this Institute was established. In consideration of the facilities for offering training for teachers through the school of education and in view of the fact that women must in larger measure be relied upon to give high school instruction, it has seemed appropriate to call the

attention of suitable women in the State to the facilities offered in the school of education, and in the various colleges of the Institute.

Architecture and Pharmacy.—Architecture and pharmacy have proven attractive professions for women. The work of these two professions is admirably adapted to the pursuit of women. The attention of young women of suitable age and preparation is called to the courses of study in the departments of architecture and pharmacy in the Institute.

Agriculture.—Agriculture is beginning to draw the attention of women. Many women desire to master those principles and processes which will enable them to direct the various activities of their home farm. Others have a more limited interest and wish only to prepare themselves for prosecuting some single phase of farm life, such as poultry, dairying, bee culture, or horticulture. Women who are interested in these fields are advised to consider the courses offered in the college of agricultural sciences.

ELECTIVES FOR WOMEN.


The Institute has no department of home economics, but recognizes the value of training in home economics. Women students, therefore, who have had home economics training of college grade in other institutions, may offer credits in the same in lieu of courses prescribed in the various courses of study in this institution. Such substitutions, however, shall be upon the approval of the Dean.

Other electives may be arranged with the approval of the appropriate Dean, provided such electives are consonant with a definite purpose in training.

HOME FOR WOMEN STUDENTS.

For women students room and board will be arranged under the best home conditions. The culture and refinement so essential to the proper environments of young women will receive especial attention in selecting a home for them.

COURSES OF INSTRUCTION.

There are thirteen degree courses for undergraduates, leading to the degree of Bachelor of Science (B. S.) and one leading to the degree of Doctor of Veterinary Medicine (D. V. M.) each requiring four years for its completion: 

COURSE IN CIVIL ENGINEERING.

COURSE IN ELECTRICAL ENGINEERING.

COURSE IN MECHANICAL ENGINEERING.

COURSE IN CHEMICAL ENGINEERING.

COURSE IN HIGHWAY ENGINEERING.
COURSE IN CHEMISTRY AND METALLURGY.
COURSE IN ARCHITECTURE.
COURSE IN ARCHITECTURAL ENGINEERING.
COURSE IN AGRICULTURE.
COURSE IN AGRICULTURAL EDUCATION.
COURSE IN SECONDARY EDUCATION.
COURSE IN PHARMACY.
GENERAL COURSE.
COURSE IN VETERINARY MEDICINE (D. V. M.)

SHORT COURSES.

THREE-YEAR COURSE IN PHARMACY (Ph. C.)
TWO-YEAR COURSE IN PHARMACY (Ph. G.)
TWO-YEAR PRE-MEDICAL COURSE.
TWO-YEAR COURSE IN AGRICULTURE.
TWO-YEAR COURSE IN APPLIED ELECTRICITY.
TWO-YEAR COURSE IN ARCHITECTURE.
TWO-YEAR COURSE IN AUTO MECHANICS.
ONE-YEAR COURSE IN WIRELESS TELEGRAPHY.

DEGREES.

Each applicant for a degree must submit his application and course of study by the fifteenth of October in his senior year.

No degree will be conferred upon a candidate *in absentia* unless he is officially excused for providential reasons.

The degree of Bachelor of Science will be granted to those students who satisfactorily complete one of the prescribed courses.

A student who completes the work of the four-year course in veterinary medicine and submits a satisfactory thesis will be granted the degree of Doctor of Veterinary Medicine (D. V. M.).

A student who completes the work of the two-year course in pharmacy and submits a satisfactory thesis will be granted the degree of Graduate in Pharmacy (Ph. G.)

A student who completes the work of the three-year course in pharmacy and submits a satisfactory thesis will be granted the degree of Pharmaceutical Chemist (Ph. C.)

A candidate for a degree must, before May fifteenth of his senior year, show such ability to write clear and correct English as to satisfy the committee on students' use of English. To promote the habitual use of clear and correct English, the written work of every student in all his courses (theses, reports, quizzes, examination papers, etc.) is subject to inspection by the committee. If any student be found deficient, the committee will prescribe for him such work as in its judgment is proper, and this work must be done to the satisfaction of the committee before the student can obtain his degree.

CERTIFICATES.

A student who completes satisfactorily all the work of the senior class in a department, including the laboratory work, and stands a satisfactory examination in English, may, with approval of the faculty, be awarded a certificate of proficiency in that subject.

Students who complete one of the two-year courses will, on passing a satisfactory examination, receive certificates indicating their attainments.

GRADUATE COURSES.

A more extended course of study may be taken by a graduate of this institution or of any college of equal grade. The completion of a course which leads to a post-graduate degree of Master of Science requires one year's residence, spent in the satisfactory prosecution of a course of study, with such laboratory work as may be approved by the faculty.

The candidate must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to his course, and must pass an examination at the close of each term, on the course of study prescribed, in which he must attain a grade of 75 per cent. The examination is written and also oral in the presence of the faculty.

The subject for the thesis must be submitted to the faculty for approval prior to January first, and the thesis given to the professor by May first.

Applicants for post-graduate degrees and special students in post-senior studies are subject to the same general regulations as other students, and *pay the same fees*, but are exempt from all military duty.

The following courses are prescribed for the degrees named:

1. *Master of Science*.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class; or in special cases, with the approval of the faculty, a student may devote his full time to work in two departments, in each of which he has completed the full senior course.

2. *Master of Science in Pharmacy*.—Pharmacy and Chemistry.

PROFESSIONAL DEGREES IN ENGINEERING.

1. *Degrees in Course*.—The professional degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, Chemical Engineer, or Engineer of Mines, will be conferred upon graduate students upon the satisfactory completion of the course of study prescribed, a residence of one year being required for the completion of those courses.

A written application stating the degree desired and the course of study selected must be submitted to the faculty at the beginning of the session. A satisfactory thesis must be submitted by May first.

The following courses of study are prescribed for the degrees named:

Civil Engineer.—Civil engineering and any two subjects selected from the following: Mathematics, analytical mechanics, mechanical engineering, electrical engineering, mining engineering, bacteriology.

Electrical Engineer.—Electrical engineering and mechanical engineering, or electrical engineering, mathematics and civil engineering.

Mechanical Engineer.—Mechanical engineering and machine design, or mechanical engineering, mathematics and mining engineering.

Chemical Engineer.—Electro-chemistry and advanced analytical or organic chemistry, together with one or more subjects selected from the following: Mechanical engineering, machine design, electrical engineering, mining engineering.

II. Degrees for Professional Work.—The above named professional degrees may be conferred upon graduates of the Alabama Polytechnic Institute in civil, electrical, mechanical, chemical and mining engineering, upon complying with the following requirements:

1. The candidate must have spent at least four full years in the practice of that branch of engineering in which he graduated.

2. An approved thesis must be submitted to the faculty not later than May 1st of the year in which the degree is sought.

3. The student must show that he has filled satisfactorily a responsible position in charge of important engineering work. Written testimonials from employers or clients will be accepted as evidence of satisfactory service.

4. A written application, stating the degree desired, and giving a report or outline of the professional work upon which the application is based, must be submitted not later than January 1st of the year in which the degree is to be granted.

III. Special Students in Graduate Studies.—Students who are not graduates, but are qualified in special subjects to prosecute graduate studies, and desire to prepare themselves more thoroughly for professional or special work in any of the departments of engineering, chemistry, pharmacy, veterinary science, or other subjects in which instruction is given, may, when qualified, with approval of the faculty, enter this higher department of study and have all the privileges of post-graduate students.

A certificate of proficiency will be given when any one subject of a post-graduate course is satisfactorily completed.

Two degrees will not be given in the same year.

SUMMER SESSION.

A six weeks' summer session beginning immediately after commencement is conducted for:

I. Teachers who wish preparation for the State examinations, extension of certificates, exemption from county institute attendance, or greater teaching efficiency.

II. Intending teachers who wish to meet certificate requirements and to learn the spirit, organization, and methods of the modern school.

III. Principals, supervisors, and superintendents who wish to prepare for the growing opportunities for a higher type of educational service made possible by Alabama's recent advances in school legislation and taxation.

IV. Vocational Agricultural Teachers. Graduates from normal schools and from academic courses in colleges and universities who wish to prepare for teaching in vocational agriculture will find opportunity to study for the degree of B. S. in Agricultural Education.

V. College students who wish to make up back work or to earn advance credits toward the bachelor's or the master's degree. Not more than one-fifth of the maximum work allowable for the regular year may be taken in one summer.

VI. High school graduates who wish to substitute summer session work for one college year, thereby earning their degree one year earlier.

VII. High school students who wish to earn credits toward the high school diploma or to remove college entrance conditions. Not more than one unit of high school credit may be earned in one summer.

VIII. Prospective Home Demonstration Agents. Home demonstration agents are employed in all the counties of the State. Recruits are required every year. Liberal courses in preparation for service in this field will be offered.

IX. Persons interested in business and commercial courses, including stenography and typewriting; penmanship; arithmetic and modern languages.

X. Religious leaders who wish strong courses in religious education to prepare themselves for larger influence in the spiritual life of their communities.

Pleasant summer residence and moderate living expenses contribute to Auburn's attractiveness as a place for summer study.

The full announcement of courses, faculty, and boarding rates will be furnished on request.

COURSES OF INSTRUCTION

The numbers immediately following the subjects of study in the Courses of Instruction refer to the courses offered in each department and described in another section of the catalogue under "Description of Courses." The numbers in columns indicate the hours per week.

English, German, French, Latin or Spanish may be taken as language in junior and senior classes, provided there is no conflict in schedule. Approved courses in Education may be substituted for language in junior and senior classes in all courses.

A student, who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

In junior and senior classes students who wish to substitute another subject for R. O. T. C. will be permitted to take approved equivalent work.

GENERAL COURSE

FRESHMAN CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 101 -----	3		3		3	
History 101 -----	2		2		2	
Latin 101 (or Spanish or Science) -----	3		3		3	
Mathematics 101, 102, 103 -	5		5		5	
Chemistry 101 -----	3		3		3	
Drawing 101 or Arch 111--		4		4		4
Mechanic Arts 101 (or Water Color Painting) -----		4		4		4
Physical Training 101 ----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SOPHOMORE CLASS

Latin 201 (or Spanish or Science) -----	3		3		3	
English 201, 202 -----	3		3		3	
History 201, 202 -----	2		2		2	
Physics 202 -----	3		3		3	
Mathematics 201 -----	5		5		5	
Zoology 201, 202 or other Science -----	2	4	2	4	2	4
Chemistry 205 (or other Lab'y) -----		6		6		6
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

English 303 -----	3		3		3	
Latin 301 (or Civics) -----	3		3		3	
French 301 (or Spanish) --	3		3		3	
German 301 -----	3		3		3	
Education -----	3		3		3	
Chemistry 302, Geology or other Science -----	3		3		3	
History 301 -----		6		6		6
R. O. T. C. 301 -----	2	3	2	3	2	3

SUBJECT	SENIOR CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 401 -----	2		2		2	
Economics 401 -----	2		2		2	
Education -----	3		3		3	
Latin 401 (or Constitution- al History) -----	3		3		3	
French 401 (or Spanish) --	3		3		3	
German 401 -----	3		3		3	
History 401 -----		6		6		6
R. O. T. C. 401 -----	2	3	2	3	2	3

Botany may be substituted for freshman mechanic arts and drawing.

With approval of the Dean, other work may be substituted for sophomore mathematics and senior economics.

An approved course in Education may be substituted for one language in the junior and senior classes.

Juniors and seniors may substitute for history a laboratory of any department of natural science for which they may be qualified.

COLLEGE OF ENGINEERING AND ARCHITECTURE

FRESHMAN CLASS

The following studies in the freshman class are prescribed in the courses in civil, electrical, mechanical, and chemical engineering, and chemistry and metallurgy.

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 101 -----	3		3		3	
History 101 -----	2		2		2	
Mathematics 101, 102, 103 --	5		5		5	
Chemistry 101 -----	3		3		3	
Drawing 101 -----		4		4		4
Shop Work ME 101, 102, 103		4		4		4
Heat Engines ME 323 -----	3					
Surveying CE 103, 105 -----			3	2	3	2
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

CIVIL ENGINEERING

SOPHOMORE CLASS

English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 -----	5		5		5	
Physics 201 -----	3		3		3	
Physics 203 -----		2		2		2
R. R. Surveying CE 211, 212 -----	2	2	2	2		
Surveying CE 213 -----					2	2
Desc. Geometry Dr 202 -----	2	2	2	2	2	2
Applied Mech. ME 212 -----			3		3	
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 303 or 304 -----	3		3		3	
Mathematics 301 -----	3		3		3	
Surveying CE 321 -----	2					
Strength Matls ME 322 -----	3					
Graphic Statics CE 329, 330		4		4		
Highway Lab. HE 331, 332, 333 -----		2		2		2
Highway Eng. 301, 302, 303	3		3		3	
Mechanical Eng. 323, 324, 325 or						
Mineralogy Chm 330, 331, 332 -----	3		3		3	
Geology Chm 441 -----	2		2			
Hydraulics ME 444 -----			3			
Structural Details CE 326 -----						4
R. R. Engineering CE 327 -----					3	
Geodesy CE 325 -----					2	2
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

English or Economics 401 -	2		2		2	
Physics 401 -----	2		2			
Astronomy Phys 402 -----					2	
Theory Structures CE 444, 445, 446 -----	3		3		3	
Water Supply CE 441, 442 -	3		3			
Masonry Const. Arch. 211 -	3					
Heat. and Vent. ME 445 -	2					
Tech. Writing Dr 412 -----	1	2				
Seminar CE 459 -----	1		1		1	
Structural Des. CE 447, 448, 449 -----		4		4		4
Cement Lab. CE 432 -----		2				
Materials Lab. CE 433, 434 -				2		2
Concrete CE 450, 451 -----			3		3	
Eng. Valuation CE 452 -----			2			
Sewerage CE 443 -----					3	
Cont. and Spec. Dr 413 -----					2	
Thesis CE 456 -----				4		4
R. O. T. C. 401 -----	2	3	2	3	2	3

HIGHWAY ENGINEERING

SOPHOMORE CLASS

English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 -----	5		5		5	
Physics 201 -----	3		3		3	
Physics 203 -----		2		2		2
R. R. Surveying CE 211, 212	2	2	2	2		
Surveying CE 213 -----					2	2
Desc. Geometry Dr 202 -----	2	2	2	2	2	2
Applied Mech. ME 212 -----			3		3	
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 303 or 304 -----	3		3		3	
Mathematics 301 -----	3		3		3	
Surveying CE 321 -----	2					
Strength Matls ME 322 -----	3					
Graphic Stat. CE 329, 330 -		4		4		
Highway Eng. 301, 302, 303	3		3		3	
Highway Lab. H. E. 331, 332, 333 -----		2		2		2
Mechanical Eng. 323, 324, 325 or						
Mineralogy Chm 330, 331, 332 -----	3		3		3	
Geology Chm 441 -----	2		2			
Hydraulics ME 444 -----			3			
Struct. Details CE 326 -----						6
R. R. Engineering CE 327 --					3	
Geodesy CE 325 -----					2	2
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

English or Economics 401 -	2		2		2	
Physics 401 -----	2		2			
Astronomy Phys 402 -----					2	
Theory Struc. CE 444, 445, 446 -----	3		3		3	
Highway Eng. 453, 454, 455	3		3		3	
Masonry Const. Arch. 211 --	3					
Concrete CE 450, 451 -----			3		3	
Technical Writing Dr 412 --	1	2				
Structural Des. CE 447, 448, 449 -----		4		4		4
Economic Geol. Chem. 442, 443 -----	2					
Seminar CE 459 -----	1		1		1	
Cement Lab. CE 432 -----		2				
Materials Lab. CE 433, 434 -				2		2
Eng. Valuation CE 452 -----			2			
Thesis CE 456 -----				4		4
Cont. and Spec. Dr 413 -----					2	
R. O. T. C. 401 -----	2	3	2	3	2	3

ELECTRICAL ENGINEERING

SOPHOMORE CLASS

English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 -----	5		5		5	
Desc. Geometry Dr. 202 -----	2	2	2	2	2	2
Physics 201 -----	3		3		3	
Physics 203 -----		2		2		2
Applied Mech. ME 212 -----			3		3	
Shop Work ME 214 -----		4		4		4
R. O. T. C. 201 -----	1	2	1	2	1	2

SUBJECT	JUNIOR CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 303 or 304 -----	3		3		3	
Mathematics 301 -----	3		3		3	
Electrical Eng. 301 -----	3		3		3	
Electrical Eng. 309 -----	1		1		1	
Electrical Eng. 310 -----		4		4		4
Kinematics Dr. 306, 307 -----			3		3	
Graphic Statics Dr. 308 -----	1	1				
Machine Design Dr. 309 -----		3		4		4
Strength Matls. ME 322 -----	3					
Practical Mech. ME 321 -----	1		1		1	
Shop Work ME 326 -----		6		6		4
Mechanical Eng. 331 -----						2
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

English or Economics 401 -----	2		2		2	
Physics 401 -----	2		2			
Astronomy Phys. 402 -----					2	
Electrical Eng. 421, 422, 423 -----	5		5		5	
Electrical Eng. 424 -----		4		4		4
Telephone EE 425 -----	2		2			
Telephone EE 426 -----		2		2		
Street Railways EE 427 -----					2	
Thermodynamics ME 441 -----	5					
Power Plants ME 442 -----			5		5	
Mech. Eng. Lab. 451, 453 -----		4				4
Machine Design Dr. 409 -----	1		2		2	
Machine Design Dr. 411 -----		3		3		3
Technical Writing Dr. 412 -----	1	2				
R. O. T. C. 401 -----	2	3	2	3	2	3

MECHANICAL ENGINEERING

SOPHOMORE CLASS

English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 -----	5		5		5	
Desc. Geometry Dr 202 -----	2	2	2	2	2	2
Physics 201 -----	3		3		3	
Physics 203 -----		2		2		2
Applied Mech ME 212 -----			3		3	
Shop Work ME 214 -----		4		4		4
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

English 303 or 304 -----	3		3		3	
Mathematics 301 -----	3		3		3	
Electrical Eng. 301 -----	3		3		3	
Electrical Eng. 309 -----	1		1		1	
Electrical Eng. 310 -----		4		4		4
Kinematics Dr 306, 307 -----			3		3	
Graphic Statics Dr 308 -----	1	1				
Machine Design Dr 309 -----		3		4		4
Strength Matls ME 322 -----	3					
Practical Mech. ME 321 -----	1		1		1	
Shop Work ME 326 -----		6		6		4
Mechanics Eng. 331 -----						2
R. O. T. C. 301 -----	2	3	2	3	2	3

SUBJECT	SENIOR CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English or Economics 401 -	2		2		2	
Physics 401 -----	2		2			
Astronomy Phys 402 -----					2	
Heat and Vent. ME 445 ----	2					
Refrigeration ME 446 -----			2		2	
Thermodynamics ME 441 --	5					
Power Plants ME 442 -----			5		5	
Mech. Eng. Lab ME 451, 452, 453 -----		4		4		4
*Electrical Eng. 430, 431 --	3	4				
Hydraulics ME 444 -----			3			
Machine Design Dr 409, 410	1	6	1	6	1	6
Technical Writing Dr 412 --	1	2				
Cont. and Spec. Dr 413 ----					2	
Metallurgy Chm 402 -----					3	
R. O. T. C. 401 -----	2	3	2	3	2	3
*Masonry Construction Arch. 211 or an approved subject in the department of civil engineering may be substituted.						

CHEMICAL ENGINEERING

SOPHOMORE CLASS

English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 ----	5		5		5	
Chemistry 205 -----		6		6		6
Physics 201 -----	3		3		3	
Drawing 203 -----		4		4		4
Applied Mech. ME 212 ----			3		3	
Shop Work ME 214 -----		4		4		4
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

English 303 or 304 -----	3		3		3	
Mathematics 301 -----	3		3		3	
Organic Chem. 302 -----	3		3		2	
Industrial Chem. 301 ----	3		3		4	
Chemical Lab. 304 -----		9		9		9
Mineralogy Chm 330,331,332		4		4		4
Geology Chm 441 -----	2		2		2	
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

English or Economics 401 -	2		2		2	
Physical Chem. 405 -----	2		2		2	
German or French 401 ----	3		3		3	
Economic Geol. Chm 442,443	2				2	
Metallurgy Chm 401, 402 ---	3		3		3	
Theoretical Chem. 404 ----	2					
Engineering Chem. 403 ----			2		2	
Quant. Analysis and Org. Preparations Chm 407,408		12		12		12
Metallurgical Lab. Chm. 413		3		3		3
Electrical Eng. 306, 307 ----	2		2		2	
Gas Engines ME 324 -----			2			
R. O. T. C. 401 -----	2	3	2	3	2	3

CHEMISTRY AND METALLURGY

SOPHOMORE CLASS

Note. Students in the Sophomore class in this course may take either the course prescribed for sophomore students in chemical engineering or that prescribed for students pursuing the General Course.

JUNIOR CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 303 or 304 -----	3		3		3	
Organic Chem. 302 -----	3		3		2	
Industrial Chem. 301 -----	3		3		4	
Chem. Lab'y. 304 -----		9		9		9
Mineralogy Chm. 330, 331, 332 -----		4		4		4
Geology Chm. 441 -----	2		2		2	
Inorganic Chem. 303 -----	2		2		2	
R. O. T. C. 201 -----	2	3	2	3	2	3

SENIOR CLASS

English or Economics 401 -	2		2		2	
German or French 401 ----	3		3		3	
Physical Chem. 405 -----	2		2		2	
Economic Geology Chm 442, 443 -----	2				2	
Metallurgy Chm 401, 402 ---	3		3		3	
Theoretical Chem. 404 -----	2					
Engineering Chem. 403 -----			2		2	
Quant. Analysis and Org. Preparations Chm 407,408		12		12		12
Metallurgical Lab. Chm 413		3		3		3
Bacteriology Vet 218 -----	3	3	3	3		
R. O. T. C. 401 -----	2	3	2	3	2	3

TWO YEAR COURSE IN APPLIED ELECTRICITY

FIRST YEAR

English 101 -----	3		3		3	
Mathematics 101, 102, 103 -	5		5		5	
Electrical Eng. 306, 309 ---	3		3		3	
Heat Engines ME 323 -----	3					
Gas Engines ME 324 -----			3			
Trans. Power ME 325 -----					3	
Drawing 101 -----		4		4		4
Shop Work ME 101, 102, 103		4		4		4
Electrical Eng. s32 -----		4		4		4
Electrical Eng. 310, 311, 312		4		4		4
R. O. T. C. 101 -----	1	2	1	2	1	2

SECOND YEAR

English 201, 202 -----	3		3		3	
Mathematics 201, 202 -----	5		5		5	
Electrical Eng. 430, 431, 432	4	8	4	8	4	8
Practical Mech. ME 321 ----	1		1		1	
Shop Work ME 214 -----		4		4		4
Drawing 202 -----		4		4		4
Applied Mech. ME 212 -----			3		3	
Mechanical Eng. 334 -----				3		
Street Rys. EE 427 -----					2	
R. O. T. C. 201 -----	1	2	1	2	1	2

TWO YEAR COURSE IN AUTO-MECHANICS

FIRST YEAR

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 101 -----	3		3		3	
Mathematics 101, 102, 103 -	5		5		5	
Drawing 101 -----		4		4		4
Heat Engines ME 323 -----	3					
Auto Electricity ME 110 ----			3		3	
Auto Mech. Theory ME 107 -	3		3		3	
Auto Mech. Lab ME 108 ----		14		14		14
Oxy-Acet. Welding ME 109 -		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SECOND YEAR

English 202, 201 -----	3		3		3	
Physics 201 -----	3		3		3	
Drawing 204 -----		4		4		4
Practical Mech. ME 321 ----	1		1		1	
Auto Mech Theory ME 217 -	3		3		3	
Auto Mech Lab. ME 218 ----		14		14		14
Oxy-Acet. Welding ME 219 -		2		2		2
R. O. T. C. 201 -----	1	2	1	2	1	2

SPECIAL COURSE IN WIRELESS TELEGRAPHY

English 101 -----	3		3		3	
Mathematics 101, 102, 103 -	5		5		5	
Electrical Eng. 306, 309 ----	3		3		3	
Heat Engines ME 323 -----	3					
Gas Engines ME 324 -----			3			
Trans. Power ME 325 -----						3
Drawing 101 -----		4		4		4
Shop Work ME 101, 102, 103		4		4		4
Wireless Tele. EE s34 -----	2	2	2	2	2	2
Electrical Eng. 310, 311, 312		4		4		4
R. O. T. C. 101 -----	1	2	1	2	1	2

ARCHITECTURE

FRESHMAN CLASS

English 101 -----	3		3		3	
History 101 -----	2		2		2	
Mathematics 101, 102, 103 -	5		5		5	
Chemistry 101 -----	3		3		3	
Freehand Drawing Arch. 111		4		4		4
Descriptive Geometry Arch.						
121 -----	2	3	2	3		
Shades and Shadows Arch.						
122 -----					2	3
Elements of Architecture						
Arch. 191 -----	1	5	1	5	1	5
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SUBJECT	SOPHOMORE CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 -----	5		5		5	
Physics 201 -----	3		3		3	
History of Architecture						
Arch. 201 -----	2		2		2	
Masonry Construction Arch.						
211 -----	3					
Carpentry Construction						
Arch. 212 -----			3			
Plumbing and Drainage						
Arch 222 -----					3	
Charcoal Drawing Arch. 231		4		4		4
Perspective Arch. 242 -----					1	2
Arch. Design Arch. 291 ---	1	8	1	8	1	8
R. O. T. C. 201 -----	1	2	1	2	1	2
SUBJECT	JUNIOR CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
History of Architecture						
Arch. 301 -----	2		2		2	
Mathematics 301 -----	3		3		3	
Strength of Materials ME 322	3					
Surveying CE 101 -----	2	2				
Graphic Statics CE 330 -----				4		
Structural Details CE 326 --						4
French 301 -----	3		3		3	
Heating and Ventilation ME						
445 -----	2					
Wiring and Illumination EE						
314 -----			2			
Specifications and Contracts						
Dr 413 -----					2	
Water Color Painting Arch.						
331 -----		4		4		4
Arch. Design Arch. 391 ---		15		15		
Working Drawings Arch.						
392 -----						15
R. O. T. C. 301 -----	2	3	2	3	2	3
SUBJECT	SENIOR CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
History of Painting Arch.						
401 -----	1					
History of Sculpture Arch						
402 -----			1			
Professional Practice Arch						
415 -----					1	
Theory of Structures CE 444	3					
Reinforced Concrete CE 450,						
451 -----			3		3	
Structural Design CE 447,						
448, 449 -----		4		4		4
French 401 -----	3		3		3	
Water Color Painting Arch.						
431 -----		3		3		3
Clay Modeling Arch 441 ---		3		3		3
Architectural Design Arch						
491 -----		20		20		20
R. O. T. C. 401 -----	2	3	2	3	2	3

ARCHITECTURAL ENGINEERING

SUBJECT	FRESHMAN CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 101 -----	3		3		3	
History 101 -----	2		2		2	
Mathematics 101, 102, 103 --	5		5		5	
Chemistry 101 -----	3		3		3	
Freehand Drawing Arch 111		4		4		4
Descriptive Geometry Arch.						
121 -----	2	3	2	3		
Shades and Shadows Arch.						
122 -----					2	3
Elements of Architecture						
Arch. 191 -----	1	5	1	5	1	5
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2
SOPHOMORE CLASS						
English 201, 202 -----	3		3		3	
History 202 -----	2		2			
Mathematics 201, 202 -----	5		5		5	
Physics 201 -----	3		3		3	
History of Architecture						
Arch. 201 -----	2		2		2	
Masonry Construction Arch.						
211 -----	3					
Carpentry Construction						
Arch. 212 -----			3			
Plumbing and Drainage						
Arch. 222 -----					3	
Charcoal Drawing Arch. 231		4		4		4
Perspective Arch. 242 -----					1	2
Architectural Design Arch						
291 -----	1	8	1	8	1	8
R. O. T. C. 201 -----	1	2	1	2	1	2
JUNIOR CLASS						
History of Architecture						
Arch. 301 -----	2		2		2	
Mathematics 301 -----	3		3		3	
Strength of materials ME 322	3					
Surveying CE 101 -----	2	2				
Graphic Statics CE 330 -----				4		
Structural Details CE 326 --						4
Geology Chm 441 -----	2		2		2	
Highway Engineering HE						
301 -----	3					
Hydraulics ME 444 -----			3			
Topographic Surveying CE						
213 -----					2	2
Heating and Ventilation ME						
445 -----	2					
Wiring and Illumination EE						
314 -----			2			
Specifications and Contracts						
Dr 413 -----					2	
Arch. Design Arch. 391 -----		15		15		
Working Drawings Arch.						
392 -----						15
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
Theory of Structures CE 444	3		3		3	
Reinforced Concrete CE 450, 451			3		3	
Structural Design CE 447, 448, 449		4	4		4	
Testing Laboratory CE 432, 433, 434		2	2		2	
Water Supply CE 441	3					
Sewerage CE 443					3	
Engines and Boilers ME 323	3					
Gas Engines ME 324			3			
Transmission of Power ME 325					3	
Electricity and Magnetism EE 306	2		2			
Dynamo Electric Machinery EE 307					2	
Engineering Valuation CE 452			2			
Technical Writing Dr. 412	1	2				
Elective	5		5		4	
R. O. T. C. 401	2	3	2	3	2	3

SPECIAL COURSE IN ARCHITECTURE

FIRST YEAR

History of Architecture Arch. 201	2		2		2	
Masonry Construction Arch. 211	3					
Carpentry Construction Arch. 212			3			
Plumbing and Drainage Arch. 222					3	
Freehand Drawing Arch. 111	4		4		4	
Water Color Painting Arch. 331	4		4		4	
Descriptive Geometry Arch. 121	2	3	2	3		
Shades and Shadows Arch. 122					2	3
Perspective Arch 242					1	2
Architectural Design Arch. 291	1	8	1	8	1	8
Elective	5		5		3	
Physical Training 101		2		2		2
R. O. T. C. 101	1	2	1	2	1	2

SECOND YEAR

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
History of Architecture Arch. 301 -----	2		2		2	
History of Painting Arch. 401 -----	1					
History of Sculpture Arch. 402 -----			1			
Professional Practice Arch. 415 -----					1	
Heating and Ventilation ME 445 -----	2					
Wiring and Illumination EE 314 -----			2			
Specifications and Contracts Dr 413 -----					2	
Charcoal Drawing Arch. 231 -----	4		4			4
Water Color Painting Arch. 431 -----	3		3			3
Clay Modeling Arch. 441 -----	3		3			3
Architectural Design Arch. 391 -----	15		15			
Working Drawings Arch. 392 or Architectural Design Arch. 391 -----						15
Elective -----	6		6		6	
R. O. T. C. 201 -----	1	2	1	2	1	2

COLLEGE OF AGRICULTURAL SCIENCES

AGRICULTURE

FRESHMAN CLASS

Mathematics 104 -----	3		3		3	
English 101 -----	3		3		3	
History 101 -----	2		2		2	
Chemistry 101 -----	3		3		3	
Drawing 101 -----		4		4		4
Mechanic Arts ME 101, 102, 103 -----		4		4		4
Corn Agr. 101 -----	2	2				
Dairy Cattle Judging AH 101 -----				4		
Plant Culture Hort. 101 -----					2	2
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SOPHOMORE CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 201, 202 -----	3		3		3	
History 201 -----	2		2			
Physics 202 -----	3		3		3	
Botany 201 -----	2	4	2	4	2	4
Zoology 201 -----	2	4	2	4		
Surveying CE 102 -----	2	2				
Dairy Cattle Judging AH 101				4		
Small Grains Agr. 202 -----					2	2
Farm Accounts Agr. 201 ---			2			
Organic Chemistry 202 ----	3		3			
Agricultural Chemistry 202					3	
Beef Cattle Judging AH 201		2				
Qualitative Analysis Chm 205		6		6		6
Plant Culture Hort 201 ----					2	2
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

In addition to the required courses, each student must select from the junior electives listed below, enough approved courses to total not less than 21 credit hours and not more than 26 credit hours including R. O. T. C.

REQUIRED COURSES

English 303 or Education or Modern Language -----	3		3		3	
Agricultural Bacteriology Bot 304 -----	2	4				
Plant Physiology Bot 305 ---			2	4	2	4
Vegetable Gardening Hort 303 -----			2	2	2	2
Drainage and Terracing Agr Eng 301 -----	1	4				
Dairying AH 301 -----	2	2				
Forage Crops Agr 301 ----					2	2
Geology Chm 334 -----			3			
Entomology 301 -----	3	2				
Orchard Technique Hort 302				2		
Landscape Gardening Hort 301 -----	2					
Swine Judging AH 302 ----				4		

ELECTIVE COURSES

Quantitative Analysis Chm 304 -----		6		6		6
English 303 -----	3		3		3	
Education -----	3		3		3	
Modern Language 301 -----	3		3		3	
Veterinary Science 102 ----	2	3	2	3	2	3
Sheep Judging AH 303 ----					1	2
Bee Culture Ent 302 -----					2	2
Range and Pasture Plants Bot 306 -----	1	3				
Dairy Bacteriology Bot 307			1	3		
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

One of the following subjects is prescribed for seniors: Economics, English, Education, or a modern language. All other courses are elective, subject to the approval of the head of the department in which the student specializes and of the Dean of the College of Agricultural Sciences. Each student must take not less than twenty-one (21) credit hours and not more than twenty-six (26) credit hours per term including R. O. T. C.

ELECTIVE COURSES

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
Agricultural Engineering:						
Farm Machinery 402 ----			1	4	1	4
Agronomy:						
Soils 403 -----	2	3	2	3	2	3
Cotton 401 -----	2	2				
Miscellaneous Crops 404 --			2			
Farm Management 403 --					2	2
Animal Husbandry:						
Feeding 402 -----	3		3		3	
Live Stock Management						
406, 407, 408 -----	1	2	1	2	1	2
Animal Breeding 401 ----	2					
Herd Book 409 -----			2			
Meats 403 -----				2		
Poultry 404 -----					2	
Horse and Mule Judging						
405 -----						2
Botany:						
Plant Pathology 409 ----	2	3	2	3	2	3
Range and Pasture Plants						
306 -----	1	3				
Adv. Plant Physiology 412			1	3		
Ecology 414 -----					1	3
Horticulture:						
Fruit Growing 401 -----	3	2	3	2	3	2
Horticulture Products 402		2				
Floriculture 403 -----			1	2		
Forestry 404 -----	3					
Plant Breeding 405 -----					2	
Zoology and Entomology:						
Entomological Disease Hy-						
giene, etc., 402 -----			2	2		
Genetics 401 -----			2			
Economic Entomology 403					3	2
Miscellaneous.						
Quantitative Analysis Chm						
304 -----		6		6		6
Modern Language 401 ----	3		3		3	
Education -----	3		3		3	
English 401 -----	2		2		2	
Economics 401 -----	2		2		2	
R. O. T. C. 401 -----	2	3	2	3	2	3

SPECIAL COURSE IN AGRICULTURE

An approved course of not less than twenty-one credit hours and not more than twenty-six credit hours per term may be selected by mature students from the following subjects for which they have sufficient preparation:

Agricultural Engineering:

Farm Machinery
Gas Engines
Terracing

Agromony:

Corn
Cotton
Forage Crops
Small Grains
Soils and Fertilizers

Animal Husbandry:

Dairy Cattle Judging
Beef Cattle Judging
Meats

Dairying
Hog Judging

Feeding
Livestock Management

Poultry
Breeding
Sheep Judging

Botany:

Economic Botany
Plant Diseases

Chemistry:

General Chemistry
Chemical Laboratory

Horticulture:

Plant Culture
Vegetable Gardening
Orchard Technique
Fruit Growing

Zoology and Entomology:

Zoology
Economic Entomology
General Entomology

Miscellaneous Subjects:

Freshman English
Shop Work
Veterinary Science
Physical Training
R. O. T. C.

Only those subjects will be scheduled for which a sufficient number of students register.

DEPARTMENT OF PHARMACY Two-Year Course in Pharmacy

FIRST YEAR

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
xPharmacy Latin 305	3		3			
Chemistry 101	3		3		3	
Physiology Vet 101	2		2		2	
Qualitative Anal. Chm 205		6		6		6
Botany 202	2	4	2	4	2	4
xPharmacy 301	3		3			
xPhar. Laboratory 302	2	6	2	6		
*Phar. Chemistry 304			3		3	
*Pharmacognosy 303			3		3	
Physical Training 101		2		2		2
R. O. T. C. 101	1	2	1	2	1	2

SECOND YEAR

Pharmacy 401	3	10	3	10	3	6
Organic Chemistry 302	3		3		2	
Quantitative Anal. Chm 304		6		6		
Toxi. and Urinal. Chm 409						6
xBacteriology Vet 218	2	4	2	4		
Pharmacognosy 403	5					
United States Phar. 405			2		2	
Prescriptions and Incom- patibilities 404			2		2	
*Dispensing Phar. and Pre- scription Lab. 402			2			
Pharmacology 406			2	4	2	4
Thesis			3		3	
R. O. T. C. 201	1	2	1	2	1	4
xFirst half-year.						2

*Second half-year.

THREE-YEAR COURSE IN PHARMACY

SUBJECT	FIRST YEAR		2ND TERM		3RD TERM	
	1ST TERM		Rec. Lab.		Rec. Lab.	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 101 -----	3		3		3	
xPhar. Latin 305 -----	3		3		3	
Chemistry 101 -----	3		3		3	
xPharmacy 301 -----	3		3		3	
*Phar. Chemistry 304 -----			3			
Phar Laboratory 302 -----	2	6	2	6		
Physiology Vet 101 -----	2		2		2	
*Pharmacognosy 303 -----			3		3	
Qualitative Analysis Chm						
205 -----		6		6		6
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SECOND YEAR

Physics 102 -----	3		3		3	
Botany 202 -----	2	4	2	4	2	4
Quantitative Analysis Chm						
304 -----		6		6		6
Pharmacognosy 403 -----	5					
Zoology 201 -----	2	4	2	4		
Comparative Anatomy Zool.						
202 -----					2	4
German or French 301 -----	3		3		3	
Dispensing Phar. and Pre-						
scription Lab. 402 -----			2	4	2	4
R. O. T. C. 201 -----	1	2	1	2	1	2

THIRD YEAR

Pharmacy 401 -----	3	10	3	10	3	6
Organic Chemistry 302 ---	3		3		2	
German or French 401 ---	3		3		3	
xBacteriology Vet 218 -----	2	4	2	4		
Organic Analysis Chm 408		12				
Food and Drugs 408 -----				12		
Toxicology and Urinalysis						
Chm 409 -----						6
United States Phar. 405 --			2		2	
Pharmacology 406 -----			3		3	
Prescriptions and Incom-						
patibilities 404 -----			2		2	
Thesis -----						4
R. O. T. C. 301 -----	2	3	2	3	2	3

xFirst half-year.

*Second half-year.

FOUR-YEAR COURSE IN PHARMACY

SUBJECT	FRESHMAN CLASS					
	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
English 101 -----	3		3		3	
History 101 -----	2		2		2	
Latin 101 -----	3		3		3	
Mathematics 104 -----	3		3		3	
Chemistry 101 -----	3		3		3	
Botany 202 -----	2	4	2	4	2	4
Drawing 101 -----		4		4		4
Mechanic Arts 101 -----		4		4		4
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2
SOPHOMORE CLASS						
Physics 202 -----	3		3		3	
History 102 -----	2		2			
Zoology 201 -----	2	4	2	4		
Comparative Anatomy Zool. 202 -----					2	4
English 201, 202 -----	3		3		3	
Physiology Vet 101 -----	2		2		2	
Qualitative Analysis Chm 205 -----		6		6		6
German or French 301 ---	3		3		3	
R. O. T. C. 201 -----	1	2	1	2	1	2
JUNIOR CLASS						
German or French 401 ---	3		3		3	
English 303 -----	3		3		3	
Economics 101 -----	2		2		2	
xPharmacy 301 -----	3		3			
xPhar. Laboratory 302 -----	2	6	2	6		
Quantitative Analysis Chm 304 -----		6		6		6
Organic Chemistry 302 ---	3		3		2	
*Phar. Chemistry 304 -----			3		3	
*Pharmacognosy 303 -----			3		3	
R. O. T. C. 301 -----	2	3	2	3	2	3
SENIOR CLASS						
xBacteriology Vet 218 -----	2	4	2	4		
Pharmacy 401 -----	3	10	3	10	3	6
Pharmacognosy 403 -----	5					
Organic Analysis Chm 408 -----		12				
Food and Drugs 408 -----				12		
Toxicology and Urinalysis Chm 409 -----						6
United States Phar. 405 --			2		2	
Prescriptions and Incom- patibilities 404 -----			2		2	
*Dispensing Phar. and Pre- scriptions Lab. 402 -----			2	4	2	4
Pharmacology 406 -----			3		3	
Thesis -----						4
R. O. T. C. 401 -----	2	3	2	3	2	3

xFirst half year.

*Second half year.

PRE-MEDICAL COURSE

SUBJECT	FIRST YEAR		2ND TERM		3RD TERM	
	1ST TERM		Rec. Lab.	Rec. Lab.	Rec. Lab.	
English 101 -----	3		3		3	
Chemistry 101, 205 -----	3	6	3	6	3	6
Mathematics 104 -----	3		3		3	
French or German 301 ----	3		3		3	
Botany 202 -----	2	4	2	4	2	4
Freehand Drawing Arch 111		4		4		4
Physical Training 101 ----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SECOND YEAR						
English 201, 202 -----	3		3		3	
Physics 202, 203 -----	3	2	3	2	3	2
Physiology Vet 101 -----	2		2		2	
Organic Chemistry 203 ----	3		3			
Physiological Chemistry 204					4	
French or German 401 ----	3		3		3	
Quantitative Analysis Chm 304 -----		6		6		
Toxicology and Urinalysis Chm 409 -----						6
Zoology 201, 202 -----	2	4	2	4	2	4
R. O. T. C. 201 -----	1	2	1	2	1	2

Psychology Ed. 201 may be substituted for second year English.

SCHOOL OF EDUCATION

COURSE IN SECONDARY EDUCATION

SUBJECT	FRESHMAN CLASS		2ND TERM		3RD TERM	
	1ST TERM		Rec. Lab.	Rec. Lab.	Rec. Lab.	
English 101 -----	3		3		3	
Mathematics 101, 102, 103 -	5		5		5	
History 101 -----	2		2		2	
Chemistry 101 -----	3		3		3	
Freehand Drawing Arch. 111		4		4		4
Academic Electives -----	5		5		5	
Physical Training 101 ----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SOPHOMORE CLASS						
Psychology Ed. 201 -----	3					
Ed. Psychology Ed. 202 ----			3		3	
English 201, 202 -----	3		3		3	
History 201 -----	2		2		2	
Physics 102 -----	3		3		3	
Academic Electives -----	9		9		9	
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS						
History of Education Ed. 301 -----	2					
Theory of Education Ed. 302			2		2	
Education Elective -----	3		3		3	
Academic Electives -----	15		15		15	

SUBJECT	SENIOR CLASS		
	1ST TERM Rec. Lab.	2ND TERM Rec. Lab.	3RD TERM Rec. Lab.
Prin. of Sec. Ed. Ed. 401 ----	3		
High School Methods Ed. 402		3	3
Observation and Practice Teaching Ed. 403 -----			
School Supervision Ed. 404	2	2	2
Education Elective -----	2	2	2
Academic Electives -----	13	13	13

Freshman and sophomore electives must be approved by the Director and may be chosen from the following: Latin, French, Spanish, German, botany, drawing, mechanic arts, chemical laboratory, zoology, organic chemistry, agricultural chemistry, mathematics.

Approved electives for juniors and seniors will be chosen with the approval of the Director from the various departments of the college with the view of preparation for teaching in one of the following fields: The social sciences; the general sciences; the industrial arts; the languages.

Of the junior electives at least one subject must be chosen from each of the following groups:

Latin, German, French, Spanish, Italian.

English, history, economics, mathematics.

Geology, chemistry, botany, zoology, entomology.

COURSE IN AGRICULTURAL EDUCATION

FRESHMAN CLASS

Agr. English 101 -----	3		3		3
History 101 -----	2		2		2
Chemistry 101 -----	3		3		3
Agr. Mathematics 104 ----	3		3		3
Free Hand Dr. Arch. 111 --		4		4	
Farm Carpentry ME 101		4		4	
Farm Blacksmithing ME 103					4
Corn Agr. 101 -----	2	2			
Dairy Cattle Judging A.H.101			4		
Plant Culture Hort. 101 ----				2	2
Physical Training 101 -----		2		2	2
R. O. T. C. 101 -----	1	2	1	2	1

SOPHOMORE CLASS

Agr. English 201, 202 -----	3		3		3
History 201 -----	2		2		
Psychology Ed. 201 -----	3				
Ed. Psychology Ed. 202 ----			3		3
Chem. Lab'y Chm 205 -----		6		6	
Zoology 201 -----	2	4	2	4	
Small Grains Agr. 202 ----					6
Botany Bot. 201 -----	2	4	2	4	2
Org. Chemistry 201 -----	3		3		2
Agr. Chemistry 202 -----					4
Beef Cattle Judging A. H. 201		2			3
Dairy Cattle Judging A.H.101				4	
Surveying 102 -----	2	2			
Farm Accounts Agr. 201			2		
Plant Culture Hort. 201 ----					2
R. O. T. C. 201 -----	1	2	1	2	1

JUNIOR CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
History of Agr. Ed. Ed. 305	2					
Organization and Administration of Agr. Ed. Ed. 306			2		2	
Rural Sociology Ed. 303	3		3			
Rural Economics Ed. 304					3	
Dairying A. H. 301	2	2				
Hog Judging A. H. 302				4		
Vet. Science Vet. 102	2	3	2	3	2	3
Forage Plants Agr. 301					2	2
Drainage and Terracing Agr. Eng. 301	1	4				
Geology Chm 334			3			
Orchard Tech. Hort. 302				2		

ELECTIVE COURSES

Vocational Education Ed. 307	2		2		2	
Agricultural Bacteriology Bot. 304	2	4				
Plant Physiology Bot. 305			2	4	2	4
Entomology 301	3	2				
Bee Culture Ent. 302					2	2
Landscape Gardening Hort. 301	2					
Veg. Gardening Hort. 303			2	2	2	2
Sheep Judging A. H. 303					1	2
Chemical Lab'y Chm 304		6		6		6
Range and Pasture Plants Bot 306	1	3				
Dairy Bacteriology Bot. 307			1	3		
R. O. T. C. 301	2	3	2	3	2	3

SENIOR CLASS

Methods in Voc. Agr. Ed. 406	3		3		3	
Extension Teaching Ed. 407	2					
Observation and Practice Teaching Ed. 408				4		4
R. O. T. C. 401	2	3	2	3	2	3

ELECTIVE COURSES

Agricultural Engineering:						
Farm Machinery Agr. Eng. 402			1	4	1	4
Agronomy:						
Soils Agr. 403	2	3	2	3	2	3
Cotton Agr. 401	2	2				
Miscellaneous Crops Agr. 404			2			
Farm Management Agr. 403					2	2

Animal Husbandry:							
Feeding A. H. 402 -----	3		3		3		
Live Stock Management							
A. H. 406, 407, 408 -----	1	2	1	2	1	2	
Animal Breeding A. H. 401	2						
Herd Book A. H. 409 -----			2				
Meats A. H. 403 -----				2			
Poultry A. H. 404 -----					2		
Horse and Mule Judging							
A. H. 405 -----					2	2	
Botany:							
Plant Pathology Bot. 409 -	2	3	2	3	2	3	
Advanced Plant Physiology Bot. 412 -----			1	3			
Ecology 414 -----					1	3	
Horticulture:							
Fruit Growing Hort. 401 -	3	2	3	2	3	2	
Horticultural Products							
Hort. 402 -----		2					
Floriculture Hort. 403 --			1	2			
Forestry Hort. 404 -----	3						
Plant Breeding Hort. 405					2		
Zoology and Entomology:							
Ento. Disease, Hygiene etc.							
Zool. and Ent. 402 ----			2	2			
Genetics Zool. and Ent.							
401 -----			2				
Economic Entomology							
Zool and Ent. 403 ----					3	2	
Education -----	3		3		3		
R. O. T. C. 401 -----	2	3	2	3	2	3	

Junior and senior electives must be chosen with the approval of the Director. The electives together with the required courses must give a total of not fewer than twenty-one nor more than twenty-six credit hours for each year.

COLLEGE OF VETERINARY MEDICINE

FRESHMAN CLASS

SUBJECT	1ST TERM		2ND TERM		3RD TERM	
	Rec.	Lab.	Rec.	Lab.	Rec.	Lab.
Chemistry 101, 205 -----	3	6	3	6	3	6
Physiology Vet 101 -----	2		2		2	
English 101 -----	3		3		3	
Anatomy Vet 107 -----	1	10	1	10	1	10
Histology Vet 108 -----	2	4	2	4	2	4
Stock Judging A. H. 102, 103, 104 -----		2		2		2
Clinics Vet 112 -----		3		3		3
Vet. Science Vet 102 -----	2					
Vet. Medicine 106 -----			3		3	
Physical Training 101 -----		2		2		2
R. O. T. C. 101 -----	1	2	1	2	1	2

SOPHOMORE CLASS

Anatomy Vet 215 -----		12		8		6
Vet. Medicine -----	3		3		3	
Clinics Vet 217 -----		11		6		5
Bacteriology Vet 218 -----	2	6	2	4	2	4
Organic Chem. 203 -----	3		3			
Physiological Chem. 204 --					4	
Pharmacy Vet 220 -----			2	6	2	6
Botany 203 -----	2	4			2	4
R. O. T. C. 201 -----	1	2	1	2	1	2

JUNIOR CLASS

Surgery Vet 322 -----	4		4		4	
Anatomy Vet 324 -----	2	8	2	8	2	8
Vet. Medicine 326 -----	3		3		3	
Vet. Physiology Vet 327 -----		13		10		10
Clinics Vet 328 -----		13		10		10
Embryology Vet 325 -----	3					
Obstetrics Vet 323 -----			3		3	
Infectious Diseases Vet 329			3		2	
Shoeing Vet 330 -----	2	2				
Clinical Diagnosis Vet 331 -			1	2	1	2
R. O. T. C. 301 -----	2	3	2	3	2	3

SENIOR CLASS

Clinics Vet 436 -----		13		13		7
Therapeutics Vet 431 -----	5		5			
Principles of Breeding AH 410 -----	2					
Surgery Vet 435 -----	3					
Meat Inspection Vet 438 -----	3		3			
Pathology Vet 437 -----	2	4	2	4		
Dairying AH 411 -----				4		
Parasites Vet 440 -----			3		3	
Toxicology and Urinalysis Vet 444 -----						6
Milk Inspection Vet 442 -----					3	2
Surgical Exercises Vet 441 -					3	
Feeds and Feeding Vet 434 -					3	
Thesis Vet 443 -----		4		4		4
R. O. T. C. 401 -----	2	3	2	3	2	3

DESCRIPTION OF COURSES

ACADEMIC DEPARTMENTS

ECONOMICS.

PROFESSOR THACH.

PROFESSOR RUTLAND.

401. Elementary economics. The object of this course is to give the student a general view of economics.. It includes a study of wealth, value, price, competition, monopolization, production, and distribution; the evolution of industry, and the leading economic questions of today. Collateral reading, oral reports, and occasional written papers are required. *Two hours, entire session. T. Th. 10-11.*

402. Economics for engineers. This course is arranged especially for engineering students and consists of a study of business organization, corporation finance, and some problems of labor in large industrial plants. Hours to be arranged.

ENGLISH.

PROFESSOR RUTLAND.

PROFESSOR TAYLOR.

ASSISTANT PROFESSOR LOGGINS.

ASSISTANTS TURNER, KERNACHAN.

The mastery of one's native language is a pre-requisite to high attainment in any profession. In a technological institute, where only brief courses in foreign language can be pursued by most of the students, this mastery of the native speech becomes, if possible, even more essential to future success than in the classical colleges. This consideration alone would justify courses in English in technological institutions, but when we add to this the great cultural value of the study of language and literature, the wisdom of compulsory courses becomes obvious. The courses in English comprise the study of the theory of composition together with much practice in its application both in writing and in speaking, a survey of the history of American and English literature, and an intensive study of the greatest periods and writers in English literature.

Requirements in English for admission are set forth on a preceding page. No student will be classed as regular in any course until he has met these requirements.

The requirements as to thesis and as to proficiency in English for certificates and degrees are set forth in a preceding section of this catalogue.

FRESHMAN CLASS.

101. Composition and literature. The chief aim of this course is to aid the student to master spoken and written English for his practical needs as an educated man. In addition to frequent themes, oral and written reports, class criticism and discussion, conferences with the instructor are required in order to correct errors, to redirect misguided effort, and to arouse each student to his highest attainment.

Another aim of this course is to stimulate the enjoyment and appreciation of literature as a means to culture. Assigned readings from American and English writers, both standard and contemporary, will be announced from time to time and encouragement will be given for considerable voluntary reading. This part of the course will be conducted by means of lectures and conferences on the nature and function of literature, its types and forms, and its moral and artistic values.

In order further to encourage freshmen to participate in worthy student activities and to put forth special effort to develop their powers of expression, the department of English will give credit (a) for public speaking in literary societies, (b) for writing done for publication or original speeches delivered on college occasions, and (c) for voluntary reading in general literature done under the direction of the head of the department. Further information about this work is given at the beginning of the college session. Text-books will be announced later. *Three hours, entire session. M. W. F. 8-9, 10-11, 12-1.*

SOPHOMORE CLASS.

201. English literature for sophomores. This course covers the whole range of English literature from Anglo-Saxon times to our own, and consists of the interpretative and critical study of selected poetry and prose. The chief aim is to trace the course of English thought and feeling and to follow the development of English self-government. Another aim is to give the student not only a definite conception of the periods of literature and of the forces in life that found expression in literature, but also an appreciative understanding of the greater writers and productions. The students are required to keep full notes on the lectures as well as on the class study of selections. Text-books to be announced. *Three hours, two terms. M. W. F. 8-9, 9-10, 10-11.*

202. Public speaking. This course is required for sophomores. It is a study of the ends of speech-making and the means of securing effectiveness. Emphasis is placed upon the principles of composition and comprises practical exercises in collecting and organizing material in addition to the study of style and structure of selected speeches and readings. *Three hours, one term. M. W. F. 8-9, 9-10, 10-11.*

JUNIOR CLASS.

301. Nineteenth century literature. The time will be about equally divided between Wordsworth and his contemporaries and the writers of the Victorian period. This course will involve wide reading, discussions of the technique of the writers, their art, growth of mind, general interpretation of life, and their relation to their own time and discussions of the various movements in science, politics, philosophy, and art in their relation to the literature of the period. The work is carried on partly by lectures and partly by class study of representative masterpieces. Students will be required to take notes on both lectures and class discussions, and to write weekly reports or themes. Text-book will be announced. *Three hours, entire session. M. W. F. 9-10. (not offered in 1920-21).*

302. The essay and the novel. The large part of the first term will be given to the study of the origin and development of the English Essay. Selected essays representing the seventeenth and eighteenth centuries will be read, and much time will be devoted to the essay of the nineteenth century. The rest of the year will be devoted to the history of the novel. Representative novels from the eighteenth century to the present time are studied; and special attention is given to technic, plot and character analysis, relation to other forms of literature, the writer's conception of his art, and style. Text-book to be announced. *Three hours, entire session. M. W. F. 9-10. (not offered in 1920-21).*

303. Contemporary literature. This course includes a study of recent tendencies in the drama, novel, short story and essay. Magazines such as the Atlantic Monthly, the Nation or the Dial are used as points of departure, but most of the work will consist of extensive assigned readings out of class, together with class-room reports and discussions. *Three hours, entire session. M. W. F. 9-10.*

304. Advanced composition for engineering students. The work will consist of themes on technical subjects and quizzes based upon technical reading. Weekly themes of from 1000 to 1500 words are required. There will be individual con-

ferences and class discussions of the papers submitted. The course includes training in condensing and expanding articles, and the making of reports. The second term is given to the production of a weekly technical magazine. The third term is given to the writing, in weekly chapters, of extended themes. The class will be limited to fifteen students. *Three hours, entire session. M. W. F. 9-10.*

SENIOR CLASS.

401. Shakespeare. The development of the English Drama before Shakespeare will be reviewed briefly through assigned reading and lectures and the life of Shakespeare will be included in the matter for final examination, but the class room instruction will be devoted chiefly to a careful study of the plays. During the first few weeks several plays of the different types and representative of the different periods of authorship are given brief treatment. Most of the time, however, is given to the close study of two plays, one comedy, and one tragedy. Text-books to be announced. *Two hours, entire session. T. Th. 10-11.*

402. Agricultural journalism. This is a practical course in agricultural journalism and is required of all students in the agricultural education course. The problems of editing farm journals are studied in some detail. Assignments cover feature articles, editorial, and all other types of stories used by agricultural publications. In order to receive credit for this course, each student must have a piece of work accepted for publication by a standard farm journal. *One hour, entire session. T. 9-10.*

403. Methods of teaching English. If a sufficient number of students apply to the head of the department, a course in methods of teaching English will be offered, the text-book and hours to be determined later.

GRADUATE COURSES.

510. Prose fiction. A study of the development of English fiction, with special emphasis upon the modern novel. (Not offered in 1920-21).

502. Shakespeare. A critical study of the dramatist's art. (Not offered in 1920-21).

503. Contemporary literature. An appreciative study of leading figures in contemporary literature.

HISTORY AND LATIN.

PROFESSOR PETRIE.

INSTRUCTORS REYNOLDS AND MARTIN.

ASSISTANT EDWARDS.

HISTORY.

In this department the aim is not so much to memorize facts as to understand them. Strong emphasis is laid on the fact that history is not a succession of isolated facts, but a progressive whole, each event being at once the cause and the effect of other events. The students are taught to investigate the growth of ideas and institutions, the rise and progress of great historical movements, and the reciprocal influences of men and circumstances. Frequent use is made of diagrams, photographs, charts and maps, with which the department is well equipped. Instruction is given by text-books, lectures and class discussion, but a constant effort is made to stimulate to wider reading and research in the library. The following courses are offered:

FRESHMAN CLASS.

101. Industrial and constitutional history of the United States: The course consists of lectures and text-book work, and is somewhat advanced. All students who take it must have previously completed some high school text-book on the history of the United States. *Two hours, entire session, T. Th. 9-10.*

SOPHOMORE CLASS.

201. History of Modern Europe: Required of all members of the sophomore class. Some previous knowledge of the subject is desirable, but is not necessary. *Two hours, first and second terms. T. Th. 10-11*

202. A brief course in recent history: Not required of any student, but those who expect to take the general course may take this work. *Two hours, third term. T. Th. 10-11.*

JUNIOR CLASS.

301. Civics: This is an advanced course in the nature of our government and its practical working. *Three hours, entire session.*

302. Historical laboratory: An opportunity for advanced work in United States history, for those students of the general course who elect it as laboratory work, and for any others who are properly qualified.

The chief object kept in view is training in historical research and in the formation of independent but careful opinions based on the original sources of information, as well as on the standard authorities. Emphasis is laid on the importance of securing proper material for investigation, and every incentive is given to the collection and use of new documents, papers, and letters illustrative of Southern, and especially of Alabama history. The method of work is as follows: Informal lectures are given on important and suggestive points. After each lecture a general discussion follows, and the topics connected with it are assigned to the students with an outline of the points to be investigated. The final results are collected by each student according to his own judgment in his notebook, which is then passed in to the professor for correction and suggestion. During next session the work will be largely on industrial and economic lines. *Six hours, entire session. T. Th. 2-4, and reading two hours.*

SENIOR CLASS.

- 401. Historical laboratory: A continuation of course 302.
- 401. English constitutional history: A course for one year for members of the senior class.
- 403. International law: Brief courses are offered elective for juniors and seniors.
- 404. Military history: A course of five lectures discussing the strategy of the wars in which the United States have been engaged. Elective for juniors.

GRADUATE COURSE.

501. Graduate students are expected to take part in the junior and senior discussions, and will also meet with the professor for conference about their work. Each year some special field is taken for investigation and discussion. Those who take history as their major study are expected to devote a large part of their time to research upon some topic upon which they can consult the original sources of information.

LATIN.

The objects kept in view in this department are: An accurate knowledge of the forms and syntax; a familiarity with Latin words, their etymology and their English derivatives, an appreciation of Latin literature and an intelligent conception of Roman history and civilization, both in themselves and in their effect in the modern world.

A systematic course of instruction is given in the forms and syntax. These are taught both deductively from a grammar

and inductively from the text read. Translation is constantly practiced, sometimes at sight, sometimes after being assigned for preparation. English passages based on a familiar author or illustrative of special constructions are put in Latin, both orally and in writing. Great emphasis is laid on the etymology of the words in the text read.

In connection with every author studied in class, a course of reading in English is prescribed descriptive of his life, work and times. The historical setting and the literary value of his writings are carefully discussed, and frequent comparisons are made with modern authors.

In the freshman and sophomore classes, the study of the language is the chief point. In the higher classes a broader view is taken. The junior class makes a special study of Roman history and Roman historians. The senior class studies Roman poetry and Roman life.

The following courses are offered with the text-books named:

101. Freshman class: Exercises, Cicero, Sallust, or equivalent. *Three hours, entire session. M. T. Th. 11-12.*

201. Sophomore class: Livy, Composition. *Three hours, entire year. M. W. F. 8-9.*

301. Junior class. Livy, Tacitus, grammar, Roman History, exercises. *Three hours, entire year. M. W. F. 9-10.*

401. Senior class: Horace, Plautus, Latin literature, Grammar. *Three hours, entire year. M. W. F. 10-11.*

DEPARTMENT OF MODERN LANGUAGES

PROFESSOR ATKINSON.

INSTRUCTOR PHILLIP

FRENCH.

301. Throughout the year stress will be laid on pronunciation, the rudiments of grammar, and the acquiring of numerous idiomatic expressions. Much time will be given to the irregular verbs, the pronouns, and a practical use of such forms in each day's recitation. During the latter part of the year about one hundred pages of easy French will be read. Especial attention is given to good, idiomatic translation of the French text into English, with the view of helping the student acquire the spirit of the language. *Three hours, entire session.*

401. French 401 is for those students who have completed French 301, or its equivalent. The first term will be devoted to a thorough review of French grammar, with much composition, and as much stress as possible put on conversation.

From three to four hundred pages of French text will be read, a part of which will be scientific texts. The student will be expected to do a part of this reading outside of class. *Three hours, entire session.*

501. French 501 is for those students who have completed French 301 or equivalent, and 401. The work of the fall term will consist of a survey of French literature, and the reading of well selected texts, a part of which will be scientific. Parallel reading will consist of assignments in newspapers and magazines, literary and scientific, in order to acquaint the student with the French of journalism and of science. The remainder of the year will be devoted to the study of special periods of French literature, varying from year to year. Dictation exercises and conversation will be a regular part of this year's work. *Three hours, entire session.*

GERMAN.

301.—The aim of this course is to give the student a thorough knowledge of the fundamentals of German grammar, stressing, in addition to the declensions and verb forms, some of the more common idioms. If the progress of the students permits, some simple scientific reader will be used the latter part of the year. *Three hours, entire session.*

401.—German 401 is for those students who have completed German 301, or its equivalent. The study of Grammar and composition will be stressed throughout the year, adding to the student's knowledge a greater number of common idioms. From the first of the year scientific texts will be read. *Three hours, entire session.*

501.—German 501 is for those students who have completed German 301 and 401. The field of German literature will be briefly surveyed, and reading from eminent German authors, literary, as well as scientific, will be required. There will be collateral reading throughout the year, both from texts assigned by the professor in charge, and from magazines in the library. *Three hours, entire session.*

SPANISH.

301.—As in French 301, the aim of this course is to give the student a knowledge of the fundamentals of Spanish Grammar, stressing pronunciation, common idioms, and the more elementary grammatical rules, with a view of their application in the spoken language. About 100 pages of easy Spanish will be read during the latter part of the year. *Three hours, entire session.*

401.—This course is for those students who have completed Spanish 301 or its equivalent. The study of grammar and

composition will be continued, with as much time as possible devoted to the acquiring of a practical knowledge of conversation. Reading of scientific matter will be required, and texts based on matter relating to Latin-American countries. *Three hours, entire session.*

501.—This course is for those students who have completed Spanish 301 or its equivalent, and Spanish 401. The work of the fall term will consist of a survey of Spanish literature, and the reading of well selected texts. Students will be expected to subscribe to some Spanish magazine, the reading of which will be a regular part of the year's work. *Three hours, entire session.*

MATHEMATICS.

PROFESSOR CRENSHAW.

PROFESSOR MESSICK.

ASSISTANT PROFESSOR STOKES.

INSTRUCTORS PITTS AND DONAHUE.

ASSISTANTS CHAMBERS AND REED.

The courses of instruction offered in this department are designed chiefly to give the student the ability to apply his knowledge of mathematics to the solution of any of the ordinary problems that arise in the study and pursuit of the engineering and scientific professions. At the same time, however, the principles of pure mathematics are in no wise neglected; and every effort is made to teach the student to think and reason logically, and to give to him that training in mental discipline for which the study of mathematics is so well fitted. In the Calculus, particularly, a large part of the time is devoted to the solution of practical engineering and scientific problems.

Students in the engineering courses and in the general course to enter the freshman class in full standing must have credit for solid geometry. Should they, however, have a sufficient number of units to enter in conditional standing but without credit in solid geometry, they will be required to make up this subject during their freshman year. Solid geometry is not required in any of the other courses.

The courses offered in the different classes in this department are as follows:

FRESHMAN CLASS.

101. Plane Trigonometry: *Five hours, first term. Daily 8-9, 10-11.*

102. Advanced Algebra: *Five hours, second term. Daily 8-9, 10-11.*

103. Analytic Geometry: *Five hours, third term. Daily 8-9, 10-11.*

104. Agricultural Mathematics: For students in agriculture and agricultural education. *Three hours, entire session. M. W. F. 8-9.*

SOPHOMORE CLASS.

(for session 1920-21 only)

201. Analytic Geometry: *Five hours, first term. Daily 12-1.*

202. Differential and Integral Calculus: *Five hours, second and third terms. Daily 12-1.*

JUNIOR CLASS.

(for session 1920-21 only)

301. Differential and Integral Calculus with applications: *Three hours, entire year. M. W. F. 11-12.*

ELECTIVE COURSES.

401. Differential Equations: *Two hours, entire year.*

402. Methods of Teaching Mathematics: This course is designed for teachers of elementary mathematics, or for those who expect to make this their profession. Methods of teaching the elementary branches of mathematics will be discussed, keeping constantly in view the co-ordination of the lower branches with the higher. The course will include also a brief *resume* of the history of mathematics; and finally, an outline of a course of study in advanced mathematics to be pursued by the teacher.

403. Projective Geometry: This course which aims to present the elements of the subject, will be offered to seniors and to graduate students in architecture and engineering. *Hours to be arranged, third term.*

PHYSICS.

PROFESSOR WOOTEN.

LABORATORY ASSISTANTS DEASON, DENT, WOOD, YOUNG.

The complete course in physics extends over two years and is designed to give as far as possible an adequate and correct idea of the method of physical sciences and to lay the foundation for subsequent advanced work if the student desires to pursue the work further or intends to engage in any one of the scientific professions of which physics forms so important a basis.

The following courses are offered by the department:

SOPHOMORE CLASS.

201. A lecture course in general physics required of students who are candidates for the degree of Bachelor of Science

in any branch of engineering. The subjects treated are varied somewhat from year to year, but they follow with reasonable closeness, the scheme of mechanics and wave motion for the first term; heat and light for the second term and electricity and magnetism for the third term. Written exercises will be required from time to time and weekly assignments of problem work will be made. There will be a written quiz on the problems for the week every Friday. This course is intended to teach accuracy and precision, and the work that is given will be of such a nature as to stimulate the acquiring of the engineer's point of view.

Prerequisites: One year in elementary physics and equivalent of Math. 101 or 104. Three hours entire session M. W. F. 11-12.

202. A lecture course of more general and less technical nature than 201. This course is required of students who are candidates for the degree of Bachelor of Science in non-engineering courses. Various subjects are treated including those mentioned in 201.

Prerequisites. The equivalent of Math. 101 or 104. Three hours entire session. M. W. F. 10-11.

203. This is a laboratory course which is required of all students of whom 201 is required. Other students may select it as an optional subject. The laboratory experiments are carefully selected and they comprise precision measurements, work in heat, light, sound and electricity. The student is required to write a full report of each experiment as he completes it, and the form of compiling data and expressing methods and results is given great weight in determining average grades.

Prerequisites: One year in elementary physics and Math. 101 or 104. Two hours entire session. M. T. W. Th. F. 2-4,

SENIOR CLASS.

401. This course is a more advanced lecture course than the ones given to the sophomores. The subjects treated are varied from year to year. They are treated thoroughly and rigorously and the student is encouraged to use the language of mathematics in expressing his ideas. Required of all students who are candidates for the degree of Bachelor of Science in Engineering.

Prerequisites: Math. 301 and Physics 201. Two hours first and second terms. T. Th. 11-12.

402. Astronomy. A brief descriptive course in astronomy and astro-physics, required of students who are required to take 401. *Prerequisites;* Physics 201 or 202 and Math. 301. Two hours third term. T. Th. 11-12.

MILITARY SCIENCE AND TACTICS.

CAPTAIN SPALDING.

CAPTAIN MICHENER.

FIRST LIEUTENANTS FISCHER, FORTIER.

The military department is maintained under the Federal Law of July 2nd, 1862, and the Act of Congress, June 3rd, 1916.

Under the latter law there have been organized units in field artillery, infantry, and engineers of the Senior Division of the Reserve Officers' Training Corps, and they are supervised by the War Department. A graduate is eligible for commission in the Officers' Reserve Corps, U. S. Army.

An officer of the Regular Army is detailed as professor of Military Science and Tactics. He is assisted by three commissioned officers and a number of non-commissioned officers detailed from the army.

The Professor of Military Science and Tactics is, by the appointment of college authorities, the Commandant of Cadets.

Under the Act of June 3rd, 1916, the college is provided with arms and equipment, and a uniform is furnished by the Government for issue, by the College, to each member of the Reserve Officers' Training Corps. The uniform remains the property of the Government, and is for the use of the student only while he remains a member of the Training Corps.

The courses of instruction are graded courses, covering four years. When any member of the Senior Division of the Reserve Officers' Training Corps has completed two academic years in that division, and has been selected for further training by the president of the institution and by its professor of military science and tactics, and has agreed in writing to continue in the Reserve Officers' Training Corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, and has agreed in writing to pursue the courses in camp training prescribed by the Secretary of War, he may be furnished, at the expense of the United States, with commutation of subsistence at such rate as may be fixed by the Secretary of War, during the remainder of his service in the Reserve Officers' Training Corps. At present this amounts to twelve dollars per month.

The course in camp training prescribed by the Secretary of War consists of two summer camps, not to exceed six weeks in any one year. Transportation to and from the camps and subsistence during such travel and while at the camp is furnished at the expense of the Government.

No obligation to perform military service after graduation is incurred by the student.

The object of the military training in the Reserve Officers' Training Corps is to educate college men in the duties of a subaltern officer in the Army. After graduation he is as free as any other citizen.

The students are organized as a regiment of infantry, a battalion of field artillery, and a company of engineers. The officers are selected as far as practicable from among the seniors and juniors who are pursuing the Advanced Course of the Reserve Officers' Training Corps.

A band composed of cadets furnishes appropriate music for parades and other ceremonies and on special occasions. Members of the Reserve Officers' Training Corps are authorized to serve in the band so long as their regular course of instruction is not interfered with.

On the graduation of each class the names of such students as have shown special aptitude for military service will be reported to the Adjutant General of the Army, and to the Adjutant General of their respective states.

On graduation from the military department a student may make application for appointment as an officer in the Officers' Reserve Corps and when he has been appointed in that Corps he may make application for temporary commission as an additional second lieutenant in the Regular Army for a period of six months with full allowances and with pay of \$100.00 per month. Both applications are made voluntarily. The graduates of the Reserve Officers' Training Corps are entitled to make application but there is no obligation to do so.

101. The following courses are offered to freshmen, the student selecting the unit desired:

FIELD ARTILLERY UNIT.

Ordnance, guns, ammunition, fuses, fire control instruments, telephones, radio, duties of cannoneers, hygiene, first aid, customs, and courtesies.

INFANTRY UNIT.

Organization, Courtesy, Drill, Ceremonies, Marching, Care and Handling of Arms and Equipment, Rifle Firing, Hygiene, First Aid, Sanitation, Tactics, Physical Training and Morale.

ENGINEER UNIT.

Organization, Courtesy, Drill, Ceremonies, Marching, Care and Handling of Equipment, Rifle Firing, Hygiene, First Aid, Sanitation, Tactics, Physical Training, and Morale.

201. Instruction in the sophomore year covers the following:

FIELD ARTILLERY UNIT.

Motors, motor transportation, topography, military maps, reconnaissance, duties of cannoneers and drivers.

INFANTRY UNIT.

Organization, Courtesy, Drill, Ceremonies, Marching, Care in Handling Arms and Equipment, Rifle and Pistol Firing, Hygiene, First Aid, Sanitation, Interior Guard Duty, Minor Tactics, Physical Training, Liaison, Topography and Map Reading, Signaling, and Morale.

ENGINEER UNIT.

Organization, Military Courtesy and Discipline, Drill, Care and Handling of Equipment, Rifle Firing, Hygiene, First Aid, Sanitation, Interior Guard Duty, Minor Tactics, Morale, Physical Training, Liaison, Signaling, Military Map Making and Map Reading, Military Bridges, Fortifications and Military Roads and Communications.

301. Military courses for juniors are elective as follows:

FIELD ARTILLERY UNIT.

Gunnery, conduct of fire, communications, field engineering, equitation, hippology, and duties of non-commissioned officers.

INFANTRY UNIT.

Organization, Courtesy, Drill, Ceremonies, Marching, Care in Handling Arms and Equipment, Rifles and Pistol Firing, Hygiene, First Aid, Sanitation, Interior Guard Duty, Physical Training, Liaison, Topography, Map Reading and Map Making, Morale, Advance Guards, Outposts, Patrolling, Combat of Small and Large Units, Field Engineering, Law (Common and Military), Military Policy of United States, and Assist in the Instruction of other classes.

ENGINEER UNIT.

Military Map Making and Map Reading, Location, Construction, etc., of Military Railways, Explosives, Demolitions and Mine Warfare, Fortifications, Camp Sanitation, Minor Tactics, Interior Guard Duty, Drill, Physical Training, Liaison, Law (Common and Military), Military Policy, Rifle and Pistol Firing, Hygiene, Morale and Assist in the Instruction of the under classes.

401. Military courses for seniors are as follows:

FIELD ARTILLERY UNIT.

Military history and policy of the United States, minor tactics, military law, and duties of commissioned officers.

INFANTRY UNIT.

Combat, Rear Guards, Outposts, Scouting and Patrolling, Advance Guards, Leadership, Topography, Field Engineering, Administration, Military Policy, Economics, Military History, Military Law and Hippology, Instructors for other classes.

ENGINEER UNIT.

Military Map Making and Map Reading, Functions of Combatant Engineer Troops, Map Problems, Terrain Exercises,

Organization and Administration of Engineer Projects, Thesis on Military Engineering, Combat, Minor Tactics, Economics, Military Law, Hippology and Act as Instructors for the other classes.

PHYSICAL TRAINING AND ATHLETICS

PROFESSOR DONAHUE

The Alumni Gymnasium offers improved facilities for complete physical training in outdoor and indoor work. The college authorities attach due importance to the value of robust physical health. Military drill according to the Federal Law is required of all able-bodied students, and ample opportunity is also offered for work in the gymnasium and field sports. The aim of the athletic authorities is to develop, not only a set of highly trained athletic experts in particular fields of sports, but to interest each individual student in the care and development of the body through some form of athletic activity. While, therefore, every effort is made to maintain a high standard of athletic efficiency in various representative teams, every member of the student-body is encouraged to gratify his love for games and sports. Under present conditions it is possible for two thousand students to take physical exercises at the same time.

A new athletic field, named in honor of the surgeon, Dr. J. H. Drake, has been provided for football. It is situated on the experiment station grounds near the gymnasium. It will be gradually beautified and equipped with necessary accommodations.

The old field on the campus also will be beautified and put in such condition that the base-ball and track teams will have facilities second to none in the South.

101. The World War has shown more conclusively than ever the necessity of a rounded physical development for each individual. In order to inculcate a love of sports and recreative exercise in each individual, two hours physical exercise per week will be required of all first year students. With the love of sport once developed there will be abundant provision for satisfying this normal and desirable love of play in each boy by voluntary participation in contests on one of the many athletic teams. The student will be allowed to take part in any sport that he may desire but if he is not physically up to the standard in any way he will during his first year take such corrective exercises as may be of benefit to him. After his first year he will be expected voluntarily to practice such exercises. *Two hours, first year.*

COLLEGE OF ENGINEERING AND ARCHITECTURE

CIVIL ENGINEERING.

PROFESSOR CALLAN (on leave)

PROFESSOR BAUGHMAN.

PROFESSOR HULSE.

ASSISTANTS CALHOUN, CHAMBERS, DAVIS, MCFADEN, TAYLOR,
TROTTER.

Students in the course in civil engineering are offered in the senior year certain options in mining subjects which may be substituted for an equivalent amount of work in the civil engineering course. The optional subjects are:

Mining Engineering CE 460, *three hours per week, three terms.*

Economic Geology, Chm 442, 443, *two hours per week, two terms.*

Metallurgy, Chm 405, *three hours per week, three terms.*

FRESHMAN CLASS.

101. Surveying for architects: Problems similar to those encountered in building construction; use of surveying instruments in laying out foundations; planning and staking out drains; topographic maps of building sites. *Recitations two hours, field two hours, first term.*

102. Surveying for agricultural students: Use of surveying instruments in problems of grading, ditching, terracing, under drainage, laying out buildings, calculation of areas, description of lands, both congressional subdivision and otherwise. *Recitations two hours, field two hours, first term.*

103. Surveying for engineering students: Use, care and adjustment of surveying instruments; standardizing tapes; plotting and calculation of areas; running levels and plotting profiles; laying grades on sewers and drains. *Recitations three hours, field two hours, second term.*

105. Surveying: Continuation of CE 103. *Recitations three hours, field two hours, third term.*

SOPHOMORE CLASS.

211. Railway surveying: Preliminary surveys; location surveys; construction surveys; simple, compound and spiral curves; grades and vertical curves; cross section and calculation of earthwork; calculation of overhaul; borrow pits;

railway structures. Prerequisites CE 103 and CE 105. *Recitations two hours, field two hours, first term.*

212. Railway surveying: Continuation of CE 211. Prerequisite CE 211. *Recitations two hours, field two hours, second term.*

213. Topographic surveying: Use and adjustment of field and office instruments; topographic methods; U. S. land surveys and map work. Prerequisites CE 103, CE 105. *Recitations two hours, field two hours, third term.*

JUNIOR CLASS.

321. Surveying: The more exacting problems of plane surveying; hydrographic, mine, and city survey problems. Prerequisite CE 213. *Recitations two hours, field two hours, first term.*

329. Graphic statics: Drawing room exercises leading up to graphical determination of stresses in trusses and other framed structures. Prerequisite Drawing 202. *Recitation one hour, laboratory two hours, first term.*

330. Graphic statics: Continuation of CE 329. Prerequisite CE 329. *Laboratory two hours, second term.*

325. Geodesy: Triangulation, adjustment of error and spherical formulae; measurement of base lines; precise leveling; determination of latitude, longitude, azimuth and time. Prerequisites CE 213, 321. *Recitations two hours, field two hours, third term.*

326. Structural details: To gain familiarity with structural steel handbooks and the simpler details of steel construction, and to train in the execution of rapid drawing and neat lettering. Prerequisite Drawing 202. *Laboratory six hours, third term.*

327. Railway engineering: Inception, promotion and organization of railroad projects; alignment and grades; materials and methods of construction; operation; signaling; expenditures; the locomotive; betterment surveys. Prerequisite CE 212, 213, 321. *Recitations three hours, third term.*

SENIOR CLASS.

432. Cement laboratory: Testing and use of sand, cement and concrete; experiments to show properties and behavior of the materials under varying conditions. *Laboratory two hours, first term.*

433. Materials laboratory: Physical properties and action of wood, iron, steel, and stone, under stress; experiments to verify theoretical laws and tests according to established standards. *Laboratory two hours, second term.*

434. Materials laboratory: Continuation of CE 433. *Laboratory two hours, third term.*

441. Water supply: Rainfall, source of supply, collection and storage of water; purification; distribution. Prerequisite ME 444. *Recitations three hours, first term.*

442. Water supply: Design, construction and maintenance of city water works; water power development. Prerequisite CE 441, ME 444. *Recitations three hours, second term.*

443. Sewerage: Design, construction and maintenance of sewerage systems for towns and cities; consideration of run off from paved and built up areas; maximum rainfall; separate and combined systems. Prerequisite ME 444. *Recitations three hours, third term.*

444. Theory of structures: The fundamental principles of design of bridges, roofs and framed structures; determination of stresses in members; design of beams, plate girders, trusses, lateral bracing, portal bracing, and viaduct towers. Prerequisites CE 329, 330. *Recitations three hours, first term.*

445. Theory of structures: Continuation of CE 444. Prerequisite CE 444. *Recitations three hours, second term.*

446. Theory of structures: Continuation of CE 445. Prerequisite CE 445. *Recitations three hours, third term.*

447. Structural design: Drawing room work in detailing structures; angle connections, rivet pitch, and other details are worked out and shop drawings made. *Laboratory two hours, first term.*

448. Structural design: Continuation of CE 447. Prerequisite CE 447. *Laboratory two hours, second term.*

449. Structural design: Continuation of CE 448. Prerequisite CE 448. *Laboratory two hours, third term.*

450. Concrete: Cements, limes and mortars; methods of mixing and placing plain and reinforced concrete; the mathematical theory of design of reinforced concrete beams, slabs, columns, retaining walls. *Recitations three hours, second term.*

451. Concrete: Continuation of CE 450. Prerequisite CE 450. *Recitations three hours, third term.*

452. Engineering valuation: The fundamentals of law as they pertain to engineering; principles of valuation of public utilities and engineering projects. *Recitations two hours, second term.*

460. Mining engineering: Plans of mines, trackwork, haulage, hoisting, ventilation, drainage, design of tipples and other mine structures, selection and lay out of general mining equipment. *Three hours recitations, entire session.*

463. Thesis: The thesis may consist of design, but preferably shall be a report of an original investigation, and shall

comply in all respects with the general requirements of "Thesis" elsewhere in the catalogue.

461. Summer credit: Students in civil engineering and highway engineering will be required to furnish evidence of having been employed on engineering work of an approved nature, during at least six weeks of the vacation following the sophomore year.

462. Summer credit: Continuation of CE 461, but to be taken the succeeding, or during a later vacation.

GRADUATE STUDENTS.

581. Graduate engineering course: This course requires three hours a week to be devoted to recitations and five hours a week to practical work in field or drafting room, throughout the session. The subjects may be varied to fit the needs of the students taking the course, but will be chosen from the following: Reinforced concrete; bridge design; sewerage and water supply; specifications and contracts; highway engineering.

582. Thesis: Graduate students applying for the degree of civil engineer will be required to prepare and present a thesis, the regulations governing thesis work being the same as those prescribed for seniors.

HIGHWAY ENGINEERING.

PROFESSOR _____

JUNIOR CLASS.

301. Highway engineering: Economic principles of road improvement; analysis of resistance to traction; location, grades and drainage of new roads; full consideration of all materials for and types of road surfaces; relocation and improvement of existing roads; street plans for cities and towns; sidewalk construction. *Recitations three hours, first term.*

302. Highway engineering: Continuation of HE 301. Prerequisite HE 301. *Recitations three hours, second term.*

303. Highway engineering: Continuation of HE 302. Prerequisite HE 301, 302. *Recitations three hours, third term.*

331. Highway laboratory, non-bituminous materials: The purpose of the course is to familiarize the students with the physical properties and methods of testing of all materials used in highway construction save those of a bituminous nature. *Laboratory two hours, first term.*

332. Highway laboratory, bituminous materials: The study and testing of bituminous materials for road building and paving. Tests of penetration, ductility, solubility, flash point, specific gravity of asphalts. Prerequisite HE 331, Chm 101. *Laboratory two hours, second term.*

333. Highway laboratory, bituminous materials: Continuation of HE 332. Prerequisite HE 332. *Laboratory two hours, third term.*

SENIOR CLASS.

453. Highway engineering: Highway laws and finances; bonds and amortization; organization of highway construction; inspection problems; reports; promotion work. Prerequisites HE 301, 302, 303. *Recitations three hours, first term.*

454. Highway engineering: Continuation of HE 453. Prerequisite HE 453. *Recitations three hours, second term.*

455. Highway engineering: Continuation of HE 454. Prerequisite HE 454. *Recitations three hours, third term.*

ELECTRICAL ENGINEERING

PROFESSOR DUNSTAN.

PROFESSOR HILL.

LABORATORY ASSISTANT MCILVAINE.

JUNIOR CLASS.

301. Elementary theory of electricity and magnetism: A detailed study of the fundamental phenomena and laws of the subject. *Three hours, first term. W. Th. F. 12-1.*

302. Direct current machinery: Lectures and recitations on the principles of design, construction, installation, and operation of direct current generators and motors. This course treats in detail of the selection of machinery for given conditions, performance guarantees, acceptance tests for heating, regulation, efficiencies, etc., parallel running troubles and remedies and repairs. *Three hours, second term. W. Th. F. 12-1.*

303. Central station appliances and distribution for lighting and power service by direct currents: This course treats in detail of switch boards and appliances, calculation of circuits of various kinds, arc and incandescent lighting, metering, systems of charging for service, economics of generating plants. *Three hours, third term. W. Th. F. 12-1.*

306. Elementary theory of electricity and magnetism: For non-electrical engineering students. This course is similar to course 201, though not so detailed in treatment. *Two hours, first and second terms. T. Th. 9-10.*

307. The construction and operation of both direct and alternating current machines; tests for efficiency, regulation and heating; the generation and distribution of electric power. In this course, it is intended to cover the application of elec-

tricity to the operation of machinery. For non-electrical students. *Two hours, third term. T. Th. 9-10.*

309. Electrical measurements and tests: For students in electrical engineering and mechanical engineering. The course consists of lectures and recitations upon the measurements of current, voltage, resistance, capacities, magnetic measurements, stray power, brake tests, heat runs, and related subjects. *One hour, entire session. M. 12-1.*

310. Laboratory work: For students in electrical engineering and mechanical engineering. The course consists of galvanometer work, resistance measurements of various kinds, magnetic measurements and various tests. *Four hours, first term.*

311. Laboratory work: For students in electrical engineering and mechanical engineering. The second term is devoted to the operation of direct current motors and dynamos, characteristics of direct current machinery, methods of adjusting, compounding, etc. *Four hours, second term.*

312. Laboratory work: For students in electrical engineering and mechanical engineering. Efficiency tests, location of troubles on machine and line, switch boards and appliances and general experience in the operation of a direct current station, are given. *Four hours, third term.*

314. Wiring and illumination: This course is intended to give a working knowledge of the laws of illumination and to train students in the writing of wiring specifications. The work in wiring will cover the laws for the calculation of wires for lighting and power circuits, costs of wiring, and insurance rules governing the installation of wires. *Two hours, third term.*

SENIOR CLASS.

421. Theory of alternating currents: Lectures, recitations and problems upon the phenomena of alternating current circuits, inductances, etc. The course is introductory to the subject of alternating current machinery, and in order to take it, students must have a fair working knowledge of differential and integral calculus and vector algebra. *Five hours, first term. M. T. W. Th. F. 8-9.*

422. Alternating current machinery: Lectures and recitations upon alternating current generators, calculation of alternator voltage, regulation by various methods, parallel running, transformers, induction motors, single phase commutator motors, synchronous motors, rotaries, etc.; harmonic analysis of wave forms, the expressing of the same in Fourier series and calculation of the current produced in various circuits.

The course is somewhat advanced and in order to take it sat-

isfactorily students must have a good knowledge of the mathematical theory of alternating currents. *Five hours, second term. M. T. W. Th. F. 8-9.*

423. Transmission lines: Lectures and recitations upon line inductance and capacity, the application of hyperbolic functions to the calculation of the regulation of long transmission lines, effect of harmonics in E. M. F. waves, surges, etc. Stresses in conductors, line construction and related topics. *Five hours, third term. M. T. W. Th. F. 8-9.*

424. Laboratory work: Operation of alternating current machinery, determination of data for calculation of alternator regulation, direct determination of regulation, efficiency tests, transformer connections, transformer testing for efficiency and regulation, induction motor testing, circle diagram. Brake testing, single phase induction motors, synchronous motors, V-curves, rotaries, synchronizing, etc. The work during the third term consists chiefly in the determination of data for the student's thesis. *Four hours, entire session.*

427. Electric railway engineering: A detailed study of the subject of street and interurban electric railway service covering train resistance, grades, curves, line and track, car and power plant equipment, both direct and alternating currents, sub-station, single phase equipment, and related topics.

The course consists of recitations and lectures with constant reference to current numbers of various technical journals. *Two hours per week, one term. M. F. 11-12.*

425. Telephone engineering: History and development of telephone types, designs of telephone parts, sub-station equipment, magneto and common battery switch boards, exchange equipment, telephone power plants, over head and under ground circuits, protectors, coin collectors and meters, party lines, private branch exchanges, first and intercommunicating system, trunking, and toll boards. *Two hours, first and second terms. M. F. 11-12.*

426. Telephone laboratory: Details of telephone construction, association of parts, assembly of switch board parts, storage batteries, tests for location of faults in cable and lines, capacity and insulation tests, details of common battery and magneto switch boards, trunking schemes, etc. *Two hours, first and second terms. T. Th. 2-4.*

430. Electrical engineering: For senior mechanical engineering students. Direct current motors and generators, street railways, circuits, alternating currents, and alternating current machinery. *Three hours, first term. M. W. F. 10-11.*

431. Laboratory work for seniors in mechanical engineering: This course is given in connection with course 430, and

gives practice in the operation and testing of electrical machinery of various kinds. *Four hours, first term.*

s32. Power plant: For students taking the special course in applied electricity. The purpose is to familiarize the student with the operation of engines, pumps, generators, motors, switch board appliances and boilers. All students in this course are expected to work under the power house engineer. *Four hours, entire session.*

WIRELESS TELEGRAPHY.

s34. In response to a considerable demand it has been decided to offer a special course in wireless telegraphy. The practice work in this subject will be under the charge of a licensed wireless operator. Every effort will be made to offer to students opportunities to become familiar with the setting up, installation, and testing of wireless apparatus, as well as to become expert in sending and receiving.

Wireless messages are constantly being picked up with the wireless station, these messages coming from ships at sea, and from various wireless stations along the Atlantic Coast.

The requirements for entrance to this course will be similar to those for entrance upon the two-year course in applied electricity.

MECHANICAL ENGINEERING.

PROFESSOR WILMORE.

ASSISTANT PROFESSORS HIXON AND STOKES.

LABORATORY ASSISTANTS BUCHANAN, CARLOVITZ, CHRISTIAN, COMBS, FUNDERBURG, HOWLE, McDONALD, SCREWS, SIZEMORE.

FRESHMAN CLASS.

Students who have credit for a course satisfactorily completed in an accredited high school will be assigned to other work.

101. Shop work—carpentry: The lessons include instruction in the nature and use of tools; elementary work with the plane, saw, chisel; the construction of different kinds of joints, timber splices, cross joints, mortise and tenon, mitre and frame work, and dove tail work, comprising different joints used in cabinet work, and examples of framing roof trusses. *Four hours, one term.*

102. Shop work—wood turning and pattern making: The instruction includes the nature and use of the lathe and tools. The lessons include plain turning, caliper work, simple and compound curves, chuck work, hollow, and spherical turning,

whole and split patterns in wood for solid and cored castings with core boxes where required. Attention is called to characteristics of different timbers, and the allowances for shrinkage and draft. *Four hours, one term.*

103. Shop work—blacksmithing;—Exercises in drawing, upsetting, bending, cutting, punching, and welding, are given; also exercises in forming, hardening, tempering, and case-hardening of steel. *Four hours, one term.*

107. Auto mechanics—theory: Required of students taking first year work in auto mechanics. This work consists of a general study of the automobile mechanism, including the frame, springs, wheels, bearings, transmission, differential and motor, with a limited amount of instruction on ignition systems; also care and maintenance of the machinery of the car. *Three hours, entire session.*

108. Auto mechanics—laboratory: Required of students taking first year work in auto mechanics. Practice in overhauling and adjusting bearings, aligning wheels, and general repair of cars and trucks. *Fourteen hours, entire session.*

109. Oxy-acetylene welding: A course in welding all common metals and the cutting of wrought iron and steel. Special attention will be given to pre-heating work and taking care of expansion and contraction. Instruction will be given in the general characteristics of the different metals. *Two hours, entire session.*

110. Auto mechanics—electricity: A study of the fundamental laws of electricity and magnetism especially adapted to the needs of the students in auto mechanics. *Three hours, second and third terms. M. W. F. 10-11.*

SOPHOMORE CLASS.

212. Applied mechanics: Required of students in engineering courses. The fundamental laws of mechanical science are studied while special attention is given to the practical application of these principles to engineering work. *Three hours, second and third terms. M. W. F. 8-9.*

214. Machine shop work: Hand work in chipping, filing and scraping on cast and wrought iron. Machine work in turning, boring, reaming, facing, screw cutting; also work on planer, shaper, and milling machine. Some tool making is offered, and students are given an opportunity to assist in repair work. *Six hours, entire session.*

217. Auto mechanics—theory: Required of students taking second year work in auto mechanics. This work consists of a thorough course in starting, lighting and ignition systems, battery and tire construction, garage tools and other equipment;

also most approved methods of keeping accounts and job sheets. Instruction given in tractor and truck work. *Three hours, entire session.*

218. Auto mechanics—laboratory: Required of students taking second year work in auto mechanics. Practice is given in fitting bearings, overhauling electric systems, building batteries, locating general troubles, and repairing tubes and casings. *Fourteen hours, entire session.*

219. Oxy-acetylene welding: A continuation of Course 109 above. *Two hours, entire session.*

JUNIOR CLASS.

321. Practical mechanics: Required of students who take machine shop work. The instruction consists of recitations and lectures on general machine shop work. The construction use, and limitation of the various machine tools, the forms of cutting tools and methods of grinding them, and the form and use of jigs and gauges, are studied, together with instruction in machine management, and time and cost keeping. *One hour, entire session. Th. 10-11.*

322. Strength of materials: The properties and characteristics of the materials of engineering construction are studied, and the development of the methods of calculating their strength under different conditions of stress is explained. Many problems involving the strength of beams, girders, columns, and shafts are worked out. *Three hours, first term. M. W. F. 8-9.*

323. Heat engines: For juniors in civil engineering, architecture, architectural engineering, freshmen who register for any engineering course, and the first year students in the course in applied electricity. An elementary descriptive course in which attention is called to the different types of engines and boilers, and methods of setting, valve gears and valve setting, piping system and auxiliary apparatus for power plants. *Three hours, first term. M. W. F. 10-11.*

324. Gas engines: Required of seniors in chemical engineering, juniors in civil engineering, architectural engineering and the first year students in the two-year course in applied electricity. A descriptive course in gas, gasoline and oil engines; different types, different cycles, carburetion, ignition, troubles and remedies. *Three hours, second term. M. W. F. 11-12.*

325. Transmission of power: Required of juniors in civil engineering, architectural engineering and of the first year students in the two-year course in applied electricity. Shafting, pulleys, bearings, belting, gearing, aligning of shafting, calculation of pulley and gear sizes, power of belts, lubrication and lubricating system. *Three hours, third term. M. W. F. 11-12.*

326. Same as M. E. 214, for year 1920-21.

331. Laboratory: Required of juniors in the course of mechanical engineering and electrical engineering. The work will consist in the adjustment and calibration of instruments used in engineering work, and the adjustment and operation of gas, gasoline and steam engines. Tests will be made to determine the efficiency of machines such as hoists, jack screws, gearing, belts and other transmission devices, together with some work in valve setting and power measurements of steam engine. Complete and accurate written reports of each experiment are required. *Two hours, third term.*

334. Laboratory: Required of second year students in the two-year course in applied electricity. The work will consist of the calibration of instruments, indicator work, valve setting, fuel and furnace gas analysis, and lubricant testing. *Three hours, second term.*

SENIOR CLASS.

441. Thermodynamics: This course includes a study of the fundamental principles underlying the transformation of heat into work. The so-called perfect gases are first studied, and later the applications to the various vapors used in commercial work. The cycles and efficiencies of steam engines, internal combustion engines, hot air engines, air compressors, and refrigerating machines are studied. *Five hours, first term. M. T. W. Th. F. 12-1.*

442. Power plant engineering: A study is made of the practical applications of power plant machinery. The different elements are considered and the efficiencies of different combinations discussed. Problems are worked involving the designing of plants for a specific service, including estimates of cost and operating expense. Extensive files of manufacturers' catalogs are kept and technical papers and magazines are freely consulted. *Five hours, second and third terms. M. T. W. Th. F. 12-1.*

444. Hydraulics: The elementary principles of mechanics of fluids are studied. This is followed by a discussion of the theory of hydraulic turbines and pumps, including their design, installation, and operation. *Three hours, second term. M. W. F. 10-11.*

445. Heating and ventilating: The different methods of heating and ventilating buildings are treated. A study is made of the relative efficiency of hot water, steam and warm air as mediums for heating different kinds of buildings, and special attention is given to the design and operations of healthful heating systems for residences. *Two hours, first term. T. Th. 8-9.*

446. Refrigeration: The theory of the refrigeration process is studied together with its applications to commercial plants. The advantages of the various mediums, as ammonia, carbon dioxide and others are discussed, as well as methods of insulation and plant arrangement. *Two hours, second and third terms. T. Th. 8-9.*

451. Laboratory: This work includes fuel analysis and heat determination, flue gas analysis and the study of combustion, oil and lubricant testing, and valve setting and indicator analysis. *Four hours, first term.*

452. Laboratory: The course includes work in testing the strength of materials, as iron, steel, wood, and cement in tension, compression, and transverse loading, and the calibration of weirs, nozzles, and meters, a study of the flow of water in pipes, and the testing of hydraulic motors and pumps. *Four hours, second term.*

453. Laboratory: The work includes tests of engines, boilers, pumps, gas and gasoline engines complete power plants, and when opportunity offers, tests of commercial power plants. *Two hours, third term.*

459. Thesis: The thesis may consist of a design, a study of some engineering problem involving a series of tests, or a study involving the collection and analysis of data and material on some engineering subject with a statement of definite conclusions derived therefrom.

GRADUATE STUDENTS.

561. Laboratory: This course is arranged to suit the work being carried by the student, and the hours are adjusted to suit their available time.

562. Steam turbines: The theory, design and structural details of the different types of modern steam turbines are studied, and complete designs are worked out. *Three hours, first term. M. W. F. 8-9.*

563. Power plant design and economics: The economics of power plant design, the relation of the different elements of a power plant to each other, and the conditions of maximum efficiency are studied. Plants are designed to give the highest efficiency under specified conditions, and actual plants are studied to discover, if possible, sources of additional economy in operation. *Three hours, third term. M. W. F. 8-9.*

564. Works management: Methods of cost keeping, systems of organizing and paying labor, depreciation of plant, accounting and business organization are studied. Many problems are solved, including the layout of buildings and machinery for manufacturing plants. *Three hours, third term. M. W. F. 8-9.*

MACHINE DESIGN AND MECHANICAL DRAWING.

PROFESSOR FULLAN.

ASSOCIATE PROFESSOR THOMAS.

ASSISTANTS CHAMBERS, DOWLING, KYSER, WATSON.

The following courses are offered in this department:

FRESHMAN CLASS.

101. Mechanical drawing: This course in drawing is of general educational value required of students of all courses. The object of the course is to train the mind through the eye and hand with application of geometry to drawing. The work is given in the following order: (1) free-hand drawing, free-hand lettering; (2) linear drawing—geometrical construction; (3) orthographic projection, sections and intersections; (4) development of surfaces and construction of models; (5) isometric projections; and, (6) tracing and blue printing.

During the third term, in lieu of (5) above a course in agricultural drafting is given to agricultural students, as follows: (a) Farm maps, lay out for farm buildings; (b) building construction, lay out of plumbing and water supply, barns and roof construction; (c) concrete forms for making silos, watering troughs and fence posts.

During half of the year, in lieu of (5) and (6), a course in hand work correlated with drawing is given to women. The course is industrial vocational as follows: (a) Paper and card board work; (b) basketry; (c) print block and stencil; (d) wood whittling; (e) clay modelling; (f) art metal work. *Four hours, entire session.*

Credit will be given only for work as assigned by the instructor and as completed in the drawing room by the student in regular attendance of the class. Work done outside of the drawing room will not be accepted unless in very special instances pre-arranged and approved by the professor in charge of the departmental work.

SOPHOMORE CLASS.

202. Descriptive geometry: Required of all students in engineering courses. Work is given in lectures, written recitations and drafting room instruction. The problems include point, line and plane; tangents, normals, cylindrical, conical and warped surfaces, shades, shadows, and perspective; and practical applications of descriptive geometry to engineering. *Four hours, entire session. Lectures, T. Th. 9-10; drawing 2-4.*

203. Engineering drawing: For sophomore chemical engineering students. The course consists of lectures and drafting practice on the following: (a) Factory building plans showing machinery in place; (b) pipe lines with fittings for steam water and gas; (c) grinding, pulverizing, and mixing machinery; (d) machinery for sugar manufacture; (e) retorts, condensers, pumps; (f) machinery for extraction of oil from cotton seed and peanuts; (g) boiler settings and power house accessories. *Four hours, entire session.*

204. Drafting for auto mechanics: Required of second-year students in auto mechanics. Course 101 is a prerequisite. The work covers the following: (a) Plan, elevation, sections of chassis; (b) engines with sections and details; (c) ignition system with wiring diagram; (d) transmission, differentials, and clutches; (e) ball and roller bearings; (f) design of sheet metal parts used in construction; (g) body design for trucks for specific purposes. *Four hours, entire session.*

205. Motion picture projection: The course in motion picture projection is offered for those who wish to prepare themselves for the motion picture business and consists of lectures and practice with apparatus. The work is arranged as follows: (a) Electrical wiring; (b) projection lamps; (c) the optics of moving picture apparatus; (d) repair and care of films and lantern slide making for announcements; (e) management of a motion picture business—organization and operation. *Five hours, third term.*

JUNIOR CLASS.

306. Theory of machines—kinematics: Required in the courses of electrical engineering and mechanical engineering. The work of this course is given by means of lectures and drafting practice, and in the solution of problems covering the application of mechanism to machinery. Motion in machines is analyzed through kinematic chains, velocity diagrams, gear wheels, cams, screws and link work; the designing of trains of mechanisms for various purposes, and quick return motions. Illustrated lectures showing the practical application of mechanism to design are given at intervals throughout the course. *Three hours, second term.*

307. Mechanics of machinery: Required in the courses of electrical engineering and mechanical engineering, and follows course 306 which is a prerequisite. The work consists of lectures and drafting room practice, and includes problems relating to the dynamic effect of machine parts in motion—inertia and centrifugal forces. The problems include the theory of

engine governors, speed fluctuations in machinery, fly wheels for engines and pumps, accelerations in machinery and disturbing forces due to inertia of parts, and balancing methods as applied to steam and gas engines. *Three hours, third term.*

308. Graphic statics of mechanism: Required in the courses of electrical engineering and mechanical engineering. The lectures provide a brief course in graphic statics, graphical statics of mechanisms, and in the design of structures, and machine parts. The graphical method is used to investigate friction losses in machines and the efficiency of mechanisms. The graphical solution is applied to balancing of engines and to the determining of stresses due to inertia in moving parts. *Two hours, first term.*

309. Machine design: Required in the courses of electrical engineering and mechanical engineering. The course includes the design of cams, gear tooth outlines, quick return motions, link combinations, and machine fastenings. Tracings and blue prints are made from problems given in this course. The instruction is intended to familiarize the student with modern drafting room practice. *Three hours, first term, five hours, second and third terms.*

310. Inventive design: Required in the courses of electrical engineering and mechanical engineering. The course consists of problems in invention which are to be worked out through drawings and specifications in forms corresponding to that required by the United States Patent Office. The purpose of the course is to develop the inventive capacity of the student through simple problems involving mechanisms which are graded on the basis of originality, adherence to specifications, clearness, accuracy and neatness.

SENIOR CLASS.

409. Machine design—lectures: Required in the courses of electrical engineering and mechanical engineering. These lectures cover general instructions, such as the selection of materials for machine parts, proportion of parts to secure strength, symmetry and cheapness of manufacture. Problems are assigned involving the calculation of machine parts and the design of complete machines. Illustrated lantern lectures are given at intervals throughout the year. *One hour, first term; two hours, second and third terms.*

410. Machine design—drawing: Required in the course of mechanical engineering. The course includes the solution of problems involving the design of complete machines to work under specified conditions accompanied by full assembly and

detailed drawings, tracings and blue prints. *Six hours, entire session. W. 2-5, S. 10-1.*

411. Machine design—drawing: Required in the course of electrical engineering. Work is given in the same manner as that described in course 410, just preceding, but the amount of work required is reduced in proportion to the amount of time given to the subject. *Three hours, entire session. S. 10-1.*

412. Engineering writing: This course is arranged for senior students in engineering branches and is required in the courses of architectural, civil, electrical and mechanical engineering. Its purpose is to familiarize the students with the forms of technical writing and to provide exercise with written work. Course in composition (Eng. 101) is a prerequisite in this course. The lectures include a study of graphic methods in presenting facts, charts, curves and diagrams; engraving processes and the preparation of drawings for illustration; photographic illustrations—use of camera; study of trade catalogs, patent office reports, magazines and scientific papers; preparation of a complete article from notes made from a visit to a power manufacturing plant with diagrams, photographs, and drawings. *Three hours, first term, lecture S. 9-10., assigned work in library, two hours.*

413. Engineering contracts and specifications: For seniors in the engineering courses. The work is given in lectures and recitations upon engineering specifications and the elements of the laws of contracts. Exercises in the writing of specifications for machinery and engineering work are prepared by the student in note-book form. Each student is assigned an engineering project for which full specifications and contract in legal and approved form is required. *Two hours, third term. M. F. 10-11.*

414. Home industries—industrial art (vocational): This course is a continuation of the work given in 101 (8), without which it cannot be pursued. The work is arranged for the needs of students of the sophomore and junior classes, men and women, particularly suited to the latter—who intend to teach this branch in rural schools or high schools. Home industries is given important consideration. A large part of the course consists of training the vocational lines that lead to the industries. The divisions of the course are: (a) paper work; (b) basketry; (c) stencil cutting and design; (d) wood-work; (e) clay modelling and plaster casting; (f) art metal work; (g) weaving; (h) refinishing furniture; (i) pattern drafting. *One hour lecture and six hours laboratory.*

GRADUATE STUDENTS.

515. The work offered during the post graduate year is an extension of that of the senior year. Lectures include problems which involve the manufacture of machines and machine parts, and the application of graphical methods of calculations and the use of factors of enlargement and reduction applied in current practice. A research study into the patent office records of some machine or device is given for the purpose of developing the inventive capacity of the student.

516. Methods of teaching descriptive geometry and drawing: The course in the methods of teaching descriptive geometry and drawing is given to those who wish to specialize in the teaching of these branches, and includes advanced work in the shape of problems and an extended course in reading. Those who desire to avail themselves of an opportunity to practice in teaching these subjects may be permitted to attend the meetings of large classes in the work for the purpose of observing the methods of teaching.

517. Thesis: A thesis offered in this department may be the study of some machine or its parts; a research in the records of subject relating to work of the department; or a study of current practice of some specific machine. It is required to be written in parts one of which is to be presented at the end of each term.

ARCHITECTURE.

PROFESSOR BIGGIN.

ASSISTANT PROFESSOR

ASSISTANTS PERDUE, LANCASTER, SPRATLING.

The department of architecture was established in June, 1907. Four-year courses are offered in architecture and architectural engineering, both leading to the degree of Bachelor of Science. The freshman and sophomore years of these courses are respectively alike, affording the student ample opportunity for investigation before making a choice. The schedules conform to the "standard minima" of the Association of Collegiate Schools of Architecture. A two-year special course in architecture is offered for the benefit of mature draftsmen, and a certificate given on completion.

The first requirement in architecture is the ability to design. from the artistic side, that the structure may please the eye, and from the practical one, that it may suit its purpose. Next in importance are the engineering studies necessary for proper

construction. Finally the student must acquire the fundamentals of that broad cultural training everywhere recognized as indispensable to an architect's success.

Architectural design is taught on the basis of problems requiring a month or more for solution, and developed by the student under constant personal criticism. These are accompanied by short sketch problems to promote quickness of thought and execution, with no criticism until after they are turned in for judgment. Freehand drawing in some form runs throughout the entire course in architecture. History of architecture is taught by lantern lectures, accompanied by library research work and sketching; for students in architecture this is followed by short courses in the history of painting and sculpture.

A general course is given in building construction and superintendence, with the preparation of working drawings, details, and specifications. This is supplemented by special work in the various engineering departments of the college, along such lines as heating and ventilation, wiring and illumination, reinforced concrete and steel frame construction. Of foreign languages, French is the most useful to the architect and is required.

Students who at the close of the sophomore year elect architectural engineering, devote less of the remaining period than those in architecture to the subjects of design and history. They are also not required to take water color painting, clay modeling, or a foreign language. The time thus saved is occupied in engineering studies and advanced construction.

During the summer months all students in the department are required to spend one month or more in the offices of practicing architects, or follow a prescribed course in library research work and sketching; examinations are held on this in the fall, and college credit is given.

The following courses are offered in this department.

FRESHMAN CLASS.

111. Freehand drawing: Work in pencil, pen and ink, and wash from casts of architectural ornament, architectural fragments and parts of the figure. Freehand perspective. Out-of-door sketching. *Four hours, entire session. M, F. and T. Th. 2-4.*

121. Descriptive geometry: The fundamental problems of descriptive geometry are studied and applied to the solution of problems in architecture. Prerequisite course: Solid geometry. *Lectures two hours and drafting three hours, first and second terms. T. Th. 11-12, W. 2-5.*

122. Shades and shadows: Delineation of architectural shades and shadows. Prerequisite course: Arch. 121. *Lectures two hours, drafting three hours, third term. T. Th. 11-12. W. 2-5.*

191. Elements of architecture: The classic orders of architecture and elementary studies in composition, with drawings rendered in line and in India ink. *Lecture one hour, library research and drafting five hours, entire session. T. Th. 2-5.*

SOPHOMORE CLASS.

201. History of architecture and ornament: Origin and development of historical styles of architecture and ornament from the earliest times to the fall of the Roman Empire; the Moslem irruption; Romanesque and Gothic architecture. Typical examples are studied in detail and for this purpose the lantern is in constant use. Stress is laid on the evolution of a style from changes in structural forms, political and religious conditions and national character. Prerequisite course: Ancient and medieval history; students who have not offered this for entrance must pass an examination on it before the sophomore year. *Lectures two hours, with library research and sketching, entire session. T. Th. 9-10.*

211. Masonry construction: Foundations, footings and walls; limes, cements and mortars; stones and stone cutting; stone and brick masonry; terra cotta; concrete; plastering; fire resisting construction. Specifications. *Lectures three hours, first term. M. W. F. 10-11.*

212. Carpentry construction: Properties and uses of various woods; seasoning and preservation of timber; methods of framing; exterior and interior finish; slow-burning and mill construction; sheet metal work; elevators; painting and glazing; hardware. Specifications. *Lectures three hours, second term. M. W. 10-11*

222. Plumbing and drainage: General sanitation; water supply, filtration and softening; pumping and storage; fire lines, supply, vent and waste systems; plumbing fixtures; sewage disposal. *Lectures three hours, third term. M. W. F. 10-11.*

231. Charcoal drawing: Work in charcoal, pen and ink, and wash from casts of architectural subjects, antique sculpture and from life. Out-of-door sketching. Prerequisite course: Arch. 111, or its equivalent. *Four hours, entire session. T. Th. 2-4.*

242. Perspective: Theory and practice of architectural perspective, and methods of rendering. Prerequisite course: Arch. 121. *Lectures one hour and drafting two hours, third term. T. 10-11. Th., 10-12.*

291. Architectural design: A study of architectural composition; problems in design, composition, planning, motives, details and rendering. Prerequisite course: Arch. 191, or its equivalent. *Lecture one hour, library research and drafting eight hours, entire session. M. W. F. 2-5.*

JUNIOR CLASS.

301. History of architecture and ornament: Continuation of the technical and historical study of architecture and ornament; the Renaissance and modern times. During the third term particular attention is given to architectural development in the United States. Prerequisite course: Arch. 201. *Lectures two hours, with library research and sketching, entire session. M. F. 9-10.*

331. Water color painting: Work from models and still life. Conventional and sketch rendering of architectural subjects. Out-of-door sketching. Prerequisite course: Arch. 111, or equivalent. *Four hours, entire session. S. 9-1.*

391. Architectural design: Continuation of problems in design, composition and planning. The planning of domestic buildings. Prerequisite course: Arch. 291. *Fifteen hours, library research and drafting, first and second terms. M. W. F. 2-6, and three other hours. Special students and others properly prepared, may substitute a third term of design for the course in working drawings.*

392. Working drawings: Under such limitations as a client would be likely to impose, working drawings, details of construction, specifications and estimates are prepared for a building designed in course 391. *Fifteen hours, drafting, third term, M. W. F. 2-6, and three other hours.*

SENIOR CLASS.

401. History of painting: A brief survey of the development of painting with special reference to mural work. Lectures and assigned readings. *One hour, first term. W. 9-10.*

402. History of sculpture: An outline study of the development of sculpture and its relation to architectural design. Lectures and assigned readings. *One hour, second term. W. 9-10.*

415. Professional practice: Relations of the architect, owner and contractor; professional ethics; contracts and laws of business; office methods and other matters of practical value. Lectures, with assigned readings, reports and discussions. *One hour, third term. W. 9-10.*

431. Water color painting: For advanced students. Rendering of architectural subjects. Out-of-door sketching. Prerequisite course: Arch. 331. *Three hours, entire session. T. 8-11.*

441. Clay modelling: Work from architectural casts and from sketches. *Three hours, entire session, Th. 8-11.*

491. Architectural design: Advanced problems in design, composition and planning. During the third term a single major problem is studied and worked up in detail as a thesis. Prerequisite course: Arch. 391. *Twenty hours, library research and drafting, entire session. M. W. F. 2-6, S. 9-1, and four other hours.*

COLLEGE OF AGRICULTURAL SCIENCES

CHEMISTRY

PROFESSOR ROSS.

PROFESSORS HARE, BRAGG, MILLER.

ASSISTANT PROFESSOR POWELL.

INSTRUCTORS MARTIN, MARSH.

ASSISTANTS CARLOVITZ, KELLER, TODD.

Instruction in this department embraces the courses of lectures and systematic laboratory work described in the pages immediately following. The lecture and laboratory work required of each class is set out in detail under the section devoted to that class.

Courses of practical work in the laboratory are carried on in connection with all courses of lectures.

The laboratories, which are open from 9 A. M. to 5 P. M. during six days in the week, are amply supplied with everything necessary for instruction in chemical manipulation in qualitative and quantitative analysis, and in the methods of prosecuting chemical research. Unusual facilities are offered to students who wish to devote their time to the special study of practical chemistry.

Each student on entering the chemical laboratory is furnished with a work table, a set of re-agent bottles and the common re-agents and apparatus used in the qualitative and quantitative analysis.

At the close of the session he will be credited with such articles as may be returned in good order, the value of those which have been injured or destroyed being deducted from his contingent fee.

FRESHMAN CLASS.

101. Course in general chemistry: This consists of a series of lectures including a discussion of the fundamental principles of chemical philosophy in connection with the history, preparation, properties, and compounds of the metallic and non-metallic elements with the main facts and principles of organic chemistry. In this course the more common applications of chemistry to the arts and manufactures are discussed. The apparatus used for experimental illustration is extensive, containing the newest and approved improvements necessary for presenting the subject in the most attractive and instructive form. *Three hours, entire session. M. W. F. 9-10.*

SOPHOMORE CLASS.

201. Organic chemistry: For students in agriculture. This course, though somewhat more condensed, is similar to 302, with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins with reference to their functions in the life processes of plants and animals. *Three hours, first and second terms.*

202. Agricultural chemistry: This course consists of lectures on chemistry in its application to agriculture and includes a thorough discussion of the origin, composition, and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, the feeding of live stock, and the various operations carried on by the intelligent and successful agriculturist. *Four hours, third term.*

203. Organic chemistry: Similar to 201 and 302, but arranged for students in veterinary science and the premedical course. *Three hours, first and second terms.*

204. Physiological chemistry: A brief course for students in veterinary science and in the premedical course. *Four hours, third term.*

205. Qualitative analysis: All students in the courses in agriculture, chemistry and metallurgy, chemical engineering, pharmacy, veterinary science and premedical are required to take practical laboratory work. The work of this course embraces the preparation of a number of non-metallic elements, and some of the more important inorganic compounds, the identification of metals by means of the blowpipe, and the qualitative separation and detection of the bases and acids. *Six hours, entire session. M. W. F. 2-5. Sat. 9-12.*

JUNIOR CLASS.

301. Industrial chemistry: Lectures, including discussion in detail of the processes and chemical principles involved in the most important applications of chemistry, in the arts and manufactures to the preparation of materials for food and drink, for clothing, shelter, illumination, cleansing, purifying, writing, printing, etc.

These lectures are amply illustrated by means of suitable specimens of raw materials and manufactured products, together with models and diagrams. *Three hours, first and second terms; four hours, third term.*

302. Organic chemistry: Instruction in this subject embraces lectures and recitations upon the leading facts and principles of the chemistry of the carbon compounds, and in

cludes a study of the methods of preparation of the more important compounds, their properties, and their structural and stereo-chemical relations. *Three hours, first and second terms; two hours, third term.*

303. Advanced inorganic chemistry: *Two hours per week, entire session.*

304. Quantitative analysis: Gravimetric and volumetric analysis, including the analysis of limestones, iron ores, etc. *Six hours, entire session.*

330. Determinative mineralogy: The course consists of blow-pipe, flame, hardness, and other physical tests of the more important minerals. *Four hours, first term. T. Th. 2-4.*

331. Crystallography: A thorough study is made of the crystal systems with the aid of a full set of crystal models and natural crystals. Special emphasis is laid upon the more practical features which will be of service in further mineralogical work. *Four hours, second term. T. Th. 2-4.*

332. Mineralogy: The course consists of a thorough study of a large number of minerals from the standpoint of their physical characteristics. A good type collection of minerals is kept in the laboratory for comparison. An effort is made to have the students become familiar with economically important ores and non-metallic minerals, and the common rock-forming minerals so that he can identify them at sight by the application of a few simple tests. *Four hours, third term. Tu. Th. 2-4.*

334. Agricultural geology: For juniors in agriculture. This course deals with the operation and results of geological processes as follows: weathering and rock disintegration, work of winds, work of underground waters, rivers, river deposits, river valley cycle, glaciers and glaciation, lakes and swamps, shore lines, plains and plateaus, movements of ocean waters, characteristics of the atmosphere, light and warmth in the atmosphere, rain and other forms of water, winds, storms and climate. *Four hours, second term. M. Tu. Th. F. 10-11.*

SENIOR CLASS.

401. Metallurgy: This consists of lectures and recitations upon the more important metals, such as iron and steel, copper, lead, tin, silver, gold, mercury, zinc, etc. It includes a discussion of the physical and chemical properties of the metals and their alloys, the ores and their treatment, and the processes by which the metals are obtained from the ores, with chemical reactions involved. *Three hours, first term, M. W. F. 10-11; second term, M. W. F. 8-9.*

402. Metallurgy: An advanced course in iron and steel. Lectures and recitations upon the special methods of manufacturing iron and its several alloys, or steels. Required of seniors in chemical engineering, chemistry and metallurgy, and mechanical engineering. *Three hours, third term. M. W. F. 10-11.*

403. Engineering chemistry: Special attention is devoted to the study of the construction and equipment of the chemical plants devoted to the manufacture of the more important chemical products. Excursions to various chemical and metallurgical plants during the course of the year will aid in familiarizing the student with the practical details of the operation of the leading industries. *Two hours, second and third terms. M. F. 12-1.*

404. Theoretical chemistry: The more modern phases of chemical theory are given special attention. *Two hours, first term. M. F. 12-1.*

405. Physical chemistry: Lectures and recitations. *Two hours, entire session. T. Th. 11-12.*

406. Methods of teaching chemistry in the secondary schools: In this course, students who have had the necessary preliminary work in chemistry will be afforded the opportunity of taking laboratory practice in experimental chemistry for lecture purposes and for the purposes of the practical study of methods of handling classes in experimental laboratory work. Advanced students can also take the course in the history of chemistry which is provided in the senior year of the course of chemistry and metallurgy. *Hours to be arranged.*

407. Quantitative analysis: Analysis of fertilizers, soils, coals, ores, iron and steel, sugars and sugar products, feed stuffs, mineral waters, fluxes, slags, cinders, furnace gases, etc. The nature of the work is varied somewhat to suit the individual object of the student. *Twelve hours, second and third terms.*

408. Organic preparations and organic analysis. *Twelve hours, first term.*

409. Toxicology and urine analysis: For students in pharmacy and veterinary science. *Six hours, third term.*

411. Metallurgical laboratory. *Three hours, entire session. Sat. 10-1.*

441. General geology: The course covers dynamic geology, structural geology, geomorphology, and historical geology in the order named. The lectures and recitations are supplemented by laboratory instruction and geological excursions. *Two hours, entire session. Tu. Th. 8-9.*

442. Economic geology, non-metallic minerals: The course is presented by lectures and recitations and includes the study of modes of occurrence, distribution, origin and use of coal, petroleum, limestone, salines, gypsums, fertilizers, abrasives, minor non-metallic minerals and mineral waters. *Two hours, first term. M. W. 8-9.*

443. Economic geology, metallic minerals: For students who have taken course 442. The work includes a study of the ores of iron, copper, lead, zinc, gold, silver, silver-lead, aluminum, manganese, mercury, and the minor metals. *Two hours, third term. M. W. 8-9.*

AGRONOMY.

PROFESSOR DUGGAR.

PROFESSOR FUNCHESS.

INSTRUCTOR TIDMORE.

The regular agricultural course extends through four years and is intended to prepare those who complete it to become successful farmers, farm superintendents, and agricultural scientists in the various divisions of agricultural work in the U. S. Department of Agriculture and the numerous agricultural colleges and experiment stations. The studies in the regular agricultural course are so arranged that a student may obtain a thorough education while acquiring the technical training necessary to the most successful management of farming operations and of agricultural investigation or teaching. No foreign language is required for graduation in this course, but those who expect to engage in scientific work of the U. S. Department of Agriculture or of the agricultural colleges and experiment stations have the opportunity to study Latin, French, Spanish, and German, or any one or two of these.

For the benefit of those who are unable to spend four years at college and who desire to prepare for the management of a farm, a short one-year course in agriculture is provided. In this the student devotes his entire time to those studies having direct bearing on his future occupation.

The following courses of instruction are offered:

FRESHMAN CLASS.

101. Corn: Lectures, recitations, and field practice on the cultivation, judging and improvement of corn. The student assists in harvesting certain experiments, becomes acquainted with a number of the best varieties, learns to select the best ears and the best plants, and notes the results of experiments in improving or breeding corn. *Lectures two hours, laboratory two hours, first term. T. Th. 10-11, M. F. 10-12.*

SOPHOMORE CLASS.

201. Farm accounts: *Lectures two hours, second term. T. Th. 11-12.*

202. The small grains: Lectures, recitations, and field practice on wheat, oats, rye and barley. These plants are treated both as grain crops and as forage plants. *Lectures two hours, laboratory two hours, third term. T. Th. 11-12, M. F. 8-10.*

JUNIOR CLASS

301. Leguminous forage plants and soil improvement: Lectures, recitations, and field practice on this most important group of forage plants, including cowpeas, soybeans, alfalfa, the clovers, vetches, etc. These plants are treated both with reference to their use as forage plants and as a means of improving the soil. *Lectures two hours, laboratory, two hours, third term. M. F. 10-11, F. 11-1, T. 2-4.*

SENIOR CLASS.

401. Cotton: Lectures, recitations, and field practice in identifying and comparing a large number of varieties growing on the experiment station farm; judging individual cotton plants, and lectures on the cultivation, fertilization, and improvement of cotton. The collection of varieties growing on experiment station farm usually numbers between fifty and one hundred varieties, and all of these are available for students' use. *Lectures, two hours, laboratory two hours, first term. T. Th. 12-1, S. 9-11.*

402. Cotton classing: This course of laboratory work consists of practice in classing the commercial grades of cotton by comparing great numbers of samples procured from the offices of cotton buyers with a nearly complete set of type samples owned by this department. A part of this practice will be under the supervision of experienced cotton buyers. *Lectures two hours, laboratory two hours, second term. Schedule to be arranged.*

403. Farm management: A course of lectures and practice dealing largely with rotation of crops, cost of procuring different crops, system of farming, selection of a farm, and plans for the best use of the farm or soil in which each student is most interested. This course is intended to give the student an opportunity to bring to bear on practical problems the information acquired from preceding courses of instruction in agriculture and related subjects. *Lectures two hours, laboratory two hours, third term. T. Th. 12-1 W. 11-1.*

403. Soil and soils laboratory: Recitations intended to acquaint the student with the physical properties of soils, with the principal soils of Alabama, and especially those of the region from which each student comes. Instruction in this course will be given with a view to fitting a student to engage in the soil survey work of the U. S. Department of Agriculture, as well as to prepare him for the rational management of the soil of the farm. *Lectures two hours, laboratory three hours. T. Th. 9-10, M. F. 2-5, entire session.*

404 Special crops: A course of lectures dealing with sugar cane, tobacco, rice, broom-corn, and other southern crops not treated in other courses. *Lectures two hours, second term, T. Th. 12-1.*

405. Methods of teaching agriculture: This is a course of lectures and laboratory and field exercises intended to meet the needs of those who expect to teach agriculture or nature study in the common schools and agriculture in the high schools. Special attention is given to the selection of material for illustrating the principles of agriculture, and practice will be given in conducting a number of simple demonstrations. Frequent excursions are made in the fields. *Two hours, third term.*

Post graduate courses in corn production, agricultural experimentation and teaching, and farm management are offered. The exact nature of the subject will depend upon the special requirements of the student.

AGRICULTURAL ENGINEERING.

PROFESSOR NICHOLS.

ASSISTANT LEBRON.

LABORATORY ASSISTANT GREEN.

JUNIOR CLASS.

401. Drainage and terracing: Prerequisite CE 202. Lectures and field work in locating terraces, laying out ditches, and planning systems of tile drainage. *Lectures two hours, laboratory three hours, first term.*

JUNIOR AND SENIOR CLASSES.

402. Agricultural engineering: Lectures and laboratory in farm water supply, farm lighting, farm machinery and gasoline engines. *Lectures two hours, laboratory three hours, second term.*

404. Farm structures: Prerequisite Drawing 101. Study of modern plans of building, materials of construction, preservation and repair of farm buildings, special attention being given

to their relation to farm efficiency. Given alternate years to concrete. *Lectures two hours, laboratory two hours, third term.*

405. Farm concrete: A study of concrete construction particularly applied to farm structures. Given alternate years to farm structures. *Lectures two hours, third term.*

SENIOR CLASS.

403. Farm power: Prerequisite course 402. A study of farm tractors and power machinery. *Lectures two hours, laboratory three hours, second term.*

406. Dairy equipment: Lectures on general equipment of dairy barns, milk houses, and creameries. Laboratory: Pipe fitting, soldering, a study of cream separators and refrigerating machinery. *Lectures and laboratory three hours, first term.*

BOTANY.

PROFESSOR GARDNER.

ASSISTANT PROFESSOR STRATTON.

LABORATORY ASSISTANTS BROWN, KIMBROUGH, COOPER.

The courses offered by the Department of Botany are designed to meet the needs of three different groups of students; those desiring to secure some general acquaintance with the elementary facts and principles of biological science as a necessary part of a cultural education, those desiring a thorough and detailed presentation of certain aspects of the subject as a prerequisite to entrance upon the study of medicine or of some phase of applied botany such as horticulture or agronomy, and those seeking the fullest possible collegiate training in the subject as a preparation for teaching or for advanced work in the subject.

201. General botany: This course is planned to meet the needs of the classes of students just named. It is designed to furnish a broad general introduction to the fundamental principles of biological science, supplying the foundation upon which subsequent courses are built while at the same time giving to the non-specialist a good acquaintance with those biological principles which should form a part of his equipment for life. The course is not rigidly morphological, but attempts to supply an introduction to the evolutionary history, the fundamental processes, the life relations and classification of plants. Required of all sophomores in the college of agriculture. *Lectures, two hours, laboratory, four hours, entire session. T. Th. 8-9 and 2-4.*

202. Pharmacy botany: This course is designed to supply such knowledge of the facts and principles of botany as are

prerequisite to the special work of students in pharmacy. The first portion of the course is devoted to a systematic presentation in lectures and laboratory of the fundamental principles of anatomy and physiology of the higher plants, followed by detailed microscopical and microchemical examination of the more important histological elements and food substances of plants. Considerable attention is devoted to the methods, microscopical and chemical, employed in the examination of crude drugs, and the detection of adulterants. The third term is devoted to the study of the principles of classification of plants, special attention being given to medicinal and poisonous plants. Required of pharmacy and pre-medical students. *Lectures, two hours, laboratory, four hours, entire session. T. Th. 9-10, M. F. 4-6.*

203. Veterinary botany: The first part of this course is to furnish the fundamental facts concerning the nature and structure of plants. The second part of the course is to train students in the classification and recognition of poisonous and medicinal plants. The students will be taught to recognize medicinal plants in the field as well as in the laboratory. The department herbarium will be used freely to illustrate important poisonous plants. The lectures will deal with the families represented by important poisonous and medicinal plants. Required of sophomores in the veterinary college. *Lectures, two hours, laboratory, four hours, first and third terms. T. Th. 9-10, F. 2-6.*

304. Agricultural bacteriology: This course is designed to supply to students contemplating specialization in animal husbandry or in some phase of applied botany, as horticulture, forestry, or agronomy, such an introduction to the principles of bacteriology as may furnish a basis for study of the special problems to be encountered in these lines of work. After a brief introductory discussion of the general morphology and physiology of the bacteria, the biological relations of the specialized groups will be taken up. The bacteriology of fermentation and putrefaction, the nitrogen-fixing and sulfur bacteria, the application of bacterially produced processes in the industries, and the more important problems of soil bacteriology will be dealt with in such detail as time permits. The point of view throughout the course is distinctly economic. The forms pathogenic for man and for animals will not be considered. Required of juniors in agriculture. The prerequisites for this course are qualitative chemistry and general botany. Quantitative chemistry is a desirable antecedent. *Lectures, two hours, laboratory, four hours, first term. T. Th. 10-11, and T. and Th. 11-1, or M. F. 2-4.*

305. Plant physiology: This course deals with the fundamental processes involved in plant response and plant behavior as related to crop production. The topics covered in the lectures and laboratory are the following: The cell as the physiological unit; the principles of absorption; rise of sap and transpiration; water requirements of economic plants; raw materials; the carbon relations of plants; the relations to nitrogen; the products of metabolism; digestion and translocation; respiration, aeration and fermentation; growth, reproduction; the relation of plants to temperature, light and toxic agents; variation and heredity. Required of juniors in agriculture. The prerequisites of this course are qualitative chemistry and general botany. Quantitative chemistry is a desirable antecedent. *Lectures, two hours, laboratory, four hours, second and third terms. T. Th. 10-11, and T. Th. 11-1, or M. F. 2-4.*

306. Range and pasture plants: A study of the poisonous and forage plants of pasture and range. The object of this course is to familiarize the student with the important plants of this region which are beneficial or injurious to horses, cattle, hogs and sheep. Growth, habits, general aspects, distribution and ecological relations will also receive consideration. Required of juniors in veterinary medicine. Elective for juniors and seniors in agriculture. *Lectures, one hour, laboratory, three hours, first term. F. 11-12. W. 2-5.*

307. Dairy bacteriology: A study of the sources, growth and activities of bacteria that are to be found in dairy products. Prerequisite Agr. Bact. *Lectures, one hour, laboratory, three hours, second or third term.*

409. Plant pathology: In the fall term, pathological technique, the nature, processes, relationships and classification of fungi in general and disease producing fungi in particular will be studied. Such topics as saprophytism, symbiosis, parasitism and mycorrhiza will be considered. A collection of fungi will be required. The winter and spring terms will be devoted to a detailed study of plant diseases, their causes, effects and remedies. Students will be expected to become familiar with the literature of plant pathology and to make reports on assigned topics. They will be taught to recognize plant diseases in the field, and to estimate the amount of the damage. Elective for juniors and seniors. Prerequisites general botany and plant physiology. *Lectures, two hours, laboratory, three hours, entire session. T. Th. 8-9, W. 2-5.*

410. Methods in plant histology: A short course intended to familiarize students with methods for preparing microscopic slides and other materials for advanced work, and teaching botany. Prerequisite, general botany. Elective for juniors and seniors. *Laboratory four hours, second or third term.*

412. Advanced plant physiology: This course deals with some phases of plant physiology, such as growth, movement, germination, pollination and reproduction for which there was not sufficient time in the required course. Elective for seniors. *Lecture, one hour, laboratory, three hours, second or third term.*

414. Ecology: A course in field botany dealing with the distribution and association of plants in relation to their environment. Students will be expected to take field trips at the discretion of the instructor. Elective for juniors and seniors. *Lecture, one hour, laboratory, three hours, first or third term.*

425. Thesis: After a month spent in reading under the direction of the professor of botany with a view to the selection of a subject the student will carry out a series of experiments on some problem in morphology, physiology or bacteriology. In addition to original experiments the student will review the literature dealing with his chosen topic, and make a complete and satisfactory report. It is hoped that the result of this work will be worthy of publication.

HORTICULTURE.

PROFESSOR STARCHER.

ASSOCIATE PROFESSOR PRICE.

INSTRUCTORS BROWN AND COOK.

FRESHMAN.

101. Principles of plant culture: This includes the study of germination, propagation, transplanting, conditions of plant growth, etc.; also seed testing, preparation and sowing of seed beds. *Recitations, two hours, third term. T. Th. 10-11.*

Plant propagation: (to accompany 101): Laboratory practice in seed testing, propagation of plants, pruning, etc. Students are required to submit illustrated notes. *Laboratory and field, four hours, third term. T. Th. 2-4.*

JUNIOR CLASS.

301. Landscape gardening: An introduction to the general subject of landscape design. The trees, shrubs, vines, perennials, and annuals adapted to Southern gardens are studied. Individual problems are presented for the embellishment of the home and school grounds, and plans for public squares and parks are studied. *Lectures, two hours, first term, M. W. 11-12.*

302. Orchard technique: A course in spraying, pruning, fertilization, cultivation, and orchard management. *Laboratory four hours, second term. T. Th. 2-4.*

303. Vegetable gardening: Studies of the principal truck and garden crops with notes as of their origin, classification and economic importance; methods of growing, fertilizing, harvesting, marketing, and storing these crops. *Recitations and lectures, two hours; laboratory, two hours, second and third terms. M. W. 11-12, W. 2-6.*

SENIOR CLASS.

401. Fruit growing: A study of the more important fruits and nuts of the United States, with special reference to their cultivation in home plantings and commercial orchards, harvesting, grading, packing, marketing, leading varieties for the several sections. *Recitations and lectures, three hours, laboratory, two hours, entire session. M. W. F. 9-10, F. 2-4.*

402. Horticultural products: Study and practice in harvesting, grading, storing, packing, canning, and dehydrating and manufacturing horticultural by-products. *Laboratory two hours, first term. Th. 2-4.*

403. Floriculture: This course briefly covers the subject of greenhouse construction and management, with special reference to growing of the leading cut flowers, decorative, and bedding plants with discussion on the forcing and marketing. *Lecture, one hour, laboratory, two hours, second term. F. 12-1, W. 10-12.*

404. Forestry: An elementary course, embracing a study of the forest conditions in Alabama, care of woodlots, preservation of wood, and the uses of the different Southern woods. *Recitations and lectures, three hours, first term. M. W. F. 12-1.*

405. Plant breeding: A study of the improvement of plants, theories and laws of plant breeding, the origin of the choice varieties of garden and farm crops. *Lectures and recitations, two hours, third term. M. F. 12-1.*

406. Thesis: Students who expect to make their major work in horticulture are required to select a thesis subject not later than October 1st.

ZOOLOGY AND ENTOMOLOGY.

PROFESSOR HINDS.

ASSOCIATE PROFESSOR ROBINSON.

LABORATORY ASSISTANTS BRYAN, MALONE, WILKINSON, WILLIAMS.

SOPHOMORE CLASS.

201. Zoology: A general course including brief discussions of animal life in relation to plants, minerals, nature of cells, functions involved in life processes, economic consideration, and distribution. *Lectures, two hours, laboratory, four hours, first and second terms. T. and Th. 9-10 and 10-11; M. T. W. 2-4, S. 9-12.*

202. Comparative anatomy: Required course for pharmacy and pre-medical students. *Lectures, T. and Th. 9-10. laboratory, M. 2-4, S. 9-12.*

JUNIOR CLASS.

301. General entomology: This course is to familiarize the student with the most general facts of entomology, including studies of insect structures as applied to identification. There will be a systematic examination of the different groups and studies in their life history. *Lectures, three hours; laboratory, two hours, first term. M. T. Th. 8-9, Th. 11-1, 2-4.*

302. Bee culture: Elective. Prerequisites, courses 201, 301. A series of lectures on handling and managing bees. Demonstrations of modern methods in the manipulation of bees will be afforded in the college apiary. *Lectures, two hours; laboratory, two hours, third term. M. W. 8-9, T. 2-4.*

SENIOR CLASS.

401. Genetics: Elective. Prerequisite, course 201. This course will cover various phases of heredity with relation to animals including man. *Lectures, two hours, second term, M. W. 12-1.*

402. Entomology of disease, hygiene and sanitation: A series of lectures dealing with various phases of animal parasites affecting domestic animals and man will be given. Various parasitic forms will be studied in the laboratory. *Lectures, two hours; laboratory, two hours, second term. M. F. 10-11; Th. 2-4.*

403. Economic entomology: Prerequisite, course 301. A series of lectures on the principal Southern species of economic insects affecting field crops, fruits, vegetables, methods of control, preparation and application of insecticides. The structure and use of insecticide apparatus will be given. Importance

of improved methods of agricultural practices and their effectiveness as controlling factors for insect pests will be explained. A collection of economic insects will be made with identification to species. *Lectures, three hours, laboratory, two hours, third term. M. W. F. 10-11; Th. 2-4.*

ANIMAL HUSBANDRY.

PROFESSOR TEMPLETON.

INSTRUCTORS BURNS, ALFORD.

Instruction in this department is given in the class room, in the laboratories, and upon the animal husbandry farm with the live stock. While lectures are given on judging animals, the instruction does not stop with the lectures. The students are taken to the barn and feed lots where the animals are placed before them and each student is required to make a written report concerning the animals. Class-room work in dairy instruction is supplemented, strengthened, and made practical by requiring each student to work in the dairy laboratory where butter is made, where Babcock test is used, where the lactic acid in cream is determined, etc. In the senior year, trips are made to cities, state, and county fairs, and farms to study live stock judging and management. The live-stock provided by the college for the students' use in studying breeds and judging consist of pure bred herds of Angus, Hereford, Shorthorn and Jersey cattle; Southdown sheep; Duroc-Jersey, Poland China, and Berkshire hogs. Percherons, light horses, and mules are available for class work.

The department now has a complete set of herd books for practically all the leading breeds of live stock in America. By the use of these the student is able to inform himself in regard to pedigrees, and to study the different scales of points which the breeders have adopted to represent the highest types of the various breeds. All class room instruction is given by means of text-books and lectures. Many of the lectures are illustrated by the use of a balopticon.

The courses in this department may be grouped under five main heads:

(1) Judging of live stock; (2) breeding of live stock; (3) feeding of live stock; (4) management of live stock; (5) dairying.

The student is given an opportunity to specialize in animal husbandry throughout the junior and senior years. The courses are as follows:

FRESHMAN CLASS.

101. Judging dairy cattle: This course consists of the study of dairy types, characteristics and types of the various breeds, with special reference to preparing students for judging this class of live stock. Instruction is given by lecture, score card, and comparative judging. *Laboratory four hours, second term. T. Th. M. F. 2-4.*

This course will be required of the sophomore class in 1920-21. *Laboratory four hours, second term. M. F. 8-10, W. 8-10, S. 9-11.*

VETERINARY STUDENTS.

102. Judging dairy and beef cattle: It includes practical exercises in judging the breeds and types of dairy and beef cattle. *Two hours, first term.*

103. Judging swine and sheep: This embraces practical exercises in determining the good and bad points of swine and sheep. *Two hours, second term.*

104. Judging horses and mules: This consists of lectures and practical exercises in judging the various breeds and classes of horses and mules. *Two hours, third term.*

SOPHOMORE CLASS.

201. Judging beef cattle: The object of this course is to make the student familiar with the various classes and grades of cattle recognized by the leading stock markets, and to familiarize him with the leading beef breeds. Instruction is given by lectures, the use of the score card, and by comparative judging. *Laboratory, two hours, first term. M. W. F. 8-10.*

JUNIOR CLASS.

301. Dairying: The study of the secretion, character, composition, and production of milk, is made; proper methods of handling milk and cream for consumption, pasteurizing, sterilizing. The students are given thorough work in using the Babcock test and the lactometer, and the lactic acid test, together with the ordinary test for the purity of milk and its adulterants. They are also drilled on all the phases of butter-making and standardizing milk and cream. Familiarity with the construction, care, and operation of the leading makes of cream separators, and other dairy equipment, is required. *Lectures, two hours, laboratory, two hours, first term. M. W. 10-11, T. 2-4, F. 11-1.*

302. Hog judging: Considerable time is given to the study of the market class of grades, and the leading breeds of lard and bacon types of hogs adapted to Southern conditions. The

lecture work is followed by the students using the score card and doing comparative judging. *Laboratory, four hours, second term. T. 2-4, F. 10-12, M. 11-1, Th. 2-4.*

303. Sheep judging and management: The student is instructed in the methods of judging sheep, considering the market classes and grades, and the characteristics of the principal breeds. Instruction is also given in the handling of flocks under Southern conditions. *Lecture one hour, laboratory, two hours, third term. W. 10-11, T. 2-4, F. 11-1.*

SENIOR CLASS.

401. Principles of animal breeding: The lectures of this course will embrace the principles and practices involved in the improvement of the domestic animals. The subjects of reproduction, variation, selection, heredity, line breeding, inbreeding, cross breeding, grading up, etc., will be discussed in their relations to practical breeding problems. *Lectures, two hours, first term. M. Th. 10-11.*

402. Feeding: This course consists of lectures, supplemented by reference reading, upon the most profitable methods of producing, finishing, and marketing pork, beef, and mutton. The various concentrates and roughages are discussed as to their importance and efficiency as feeds for horses, mules and dairy cattle. *Lectures, three hours, entire session. M. W. F. 8-9.*

403. Meats: This consists of a study of the structure and composition of meats, quality, cost, and food value of the various cuts of beef, mutton, and pork; exercise is also given in judging the carcasses of the different classes of animals. A study is made of how the home-dressing and home-curing of pork is carried on. Lectures are given upon the effect of feeding and breeding of the different animals as affecting the value of the carcass and the quality of the meat. *Laboratory, two hours, second term. W. 2-4.*

404. Poultry: In this course an effort is made to acquaint the student with the different types of poultry with relation to their use and value on the farm. Instruction is given also in feeding, managing, housing, and judging poultry. *Lectures, two hours, third term. T. Th. 8-9.*

405. Judging horses and mules: Lectures and laboratory work are given in the judging of the various classes of horses and mules which are adapted to Alabama conditions. *Laboratory, two hours, third term. W. 2-4.*

406. Beef cattle management: The raising of beef cattle is discussed in detail, featuring the care and management of the beef herd in production and marketing. Practical work is

given in preparing animals for shows and sales. *Lecture, one hour, laboratory, two hours, first term. M. 11-12. T. 2-4.*

407. Hog management: The feeding of hogs for market, the management of the breeding herd, the study of foodstuffs with reference to their adaptability to pork production will be given in this course. A study of the equipment and methods used on the best hog farms will be brought out in the lecture work. *Lecture, one hour, laboratory, two hours, second term. M. 11-12. T. 2-4.*

408. Dairy cattle management: This course will consist of a thorough study of the management of the dairy herd under Southern conditions; the study of equipment for dairy cattle farm; developing of dairy herd, and method of keeping herd records, and register of merit testing. *Lecture, one hour, laboratory, two hours, third term. M. 11-12. T. 2-4.*

409. Herd book study: This includes a study of the various herd books with the view of becoming familiar with the pedigrees of the leading strains and families of the different breeds of live stock. Emphasis is laid on the methods and rules of registration for each of the breeds of livestock. The rules and regulations governing the importations of livestock into the United States and into Alabama, together with the rules and regulations governing the moving of livestock within the United States and Alabama are studied. *Lectures, two hours, second term, T. Th. 8-9.*

COURSES FOR VETERINARY STUDENTS.

410. Principles of breeding: Embraces the principles and practice involved in the improvement of domestic animals. The subjects of reproduction, variation, selection, heredity, grading up, etc. will be discussed in their relations to practical breeding problems. *Two hours, first term. M. Th. 10-11.*

411. Dairying: The study of the secretion, characters, composition and production of milk is made; proper methods of handling milk and cream for consumption, pasteurizing and sterilizing are covered. Students are taught how to use the Babcock test, the lactometer, and to test for lactic acid, for purity and adulterants. They are drilled in butter making and in standardizing milk and cream. Familiarity with the construction, care and operation of the leading makes of cream separators and other dairy equipment is required. *Four hours, second term. M. W. 8-10.*

SCHOOL AGRICULTURE
JUNIOR AND HOME ECONOMICS EXTENSION
DEPARTMENT

L. N. DUNCAN.

J. L. HERRON.

MARY FEMINEAR.

LOUISE THOMAS.

GLADYS TAPPAN.

*HELEN JOHNSTON.

LIDA JONES.

This department was created July 1, 1914, and is a part of the agricultural extension work conducted in Alabama by co-operation between the College and the United States Department of Agriculture.

The special lines of work in this department are as follows:

Organization of boys' corn clubs.

Organization of boys' pig clubs.

Organization of girls' canning clubs.

Home demonstration work for farm women.

Poultry clubs.

* In co-operation with the Alabama Girls' Technical Institute, Montevallo, Alabama.

DEPARTMENT OF PHARMACY.

PROFESSOR BLAKE,

LABORATORY ASSISTANT OWSLEY.

The pharmacy department of this institution is a member in good standing of the American Conference of Pharmaceutical Faculties.

Three courses are offered—the two-year course leading to the degree *Graduate in Pharmacy*; the three-year course leading to the degree *Pharmaceutical Chemist*; and the four-year course leading to the degree *Bachelor of Science in Pharmacy*.

The practical work in pharmacy includes the manufacture of not less than two hundred pharmaceutical preparations and the compounding of not less than seventy-five prescriptions.

The work in pharmacognosy includes the study of more than 250 drugs, each of which the student is required to recognize by its physical and chemical properties, giving Latin name, common name, original habitat, constituents, medicinal action and dose.

FIRST YEAR.

301. Pharmacy: Metrology; specific gravity; heat and applications of heat; fundamental operations of pharmacy; apparatus used in pharmaceutical processes, pharmaceutical arithmetic. *Three hours, first half year. M. W. F. 10-11.*

302. Pharmaceutical laboratory: Preparation of official and non-official galenicals, including the following classes of preparations: waters, spirits, liquors, mucilages, pills, elixirs, oleates, tinctures, etc. *Two hours lectures, six hours laboratory, first half year. T. Th. 12-1, Tu. 2-4, Th. 2-6.*

303. Pharmacognosy: The study of crude drugs; lectures, recitations, and practical work in identification. *Five hours, latter half year. M. W. F. 8-9.*

304. Pharmaceutical chemistry: A study of the official and non-official inorganic chemical compounds, official title, chemical formula, reactions, description, physical identification, dosage, etc. *Three hours, latter half year. M. W. F. 11-12.*

SECOND YEAR.

401. Pharmacy: Pharmaceutical technique and manufacturing pharmacy; official and non-official galenical and chemical preparations. *Three hours lectures, ten hours laboratory, first term. M. W. F. 9-10 and 11-1 S. 9-1.*

Alkaloidal assay: *Three hours lectures, ten hours laboratory, second term. M. W. F. 9-10 and 11-1 S. 9-1.*

Pharmaceutical testing and drug analysis: *Three hours lectures, six hours laboratory, third term. M. W. F. 9-10, 11-1.*

402. Dispensing pharmacy and prescription laboratory. The compounding of 75 prescriptions taken from the files of retail pharmacists. Class work to accompany. *Two hours lectures, four hours laboratory, latter half year. Tu. Th. 10-11, 2-4.*

403. Pharmacognosy: The study of crude drugs. This course is a continuation of course 303. *Five hours, first term, daily 8-9.*

404. Prescriptions and incompatibilities; A study of the prescription; its form, dosage, methods of compounding. Types of incompatibilities; lectures and recitations. *Two hours, second and third terms. T. Th. 8-9.*

405. United States Pharmacopoeia: This course is primarily a review intended to prepare the student to stand the State examinations. It covers all crude drugs, organic and inorganic chemicals and preparations found in the U. S. P. and the N. F. *Two hours, second and third terms. Tu. Th. 9-10.*

406. Pharmacology: The physiological actions of drugs. Therapeutics and materia medica of animal, vegetable and mineral drugs. *Three hours, second and third terms, M. W. F. 8-9.*

THIRD YEAR.

407. Food and drug analysis: A study of the composition and method of analysis of leading food products, such as vinegars, fats and oils, dairy products, canned fruits and vegetables, alcoholic liquors, candies, preservatives, etc.

Drug analysis includes the chemical and microscopical examination of drug products that are especially liable to adulteration. *Twelve hours, second term, M. W. F. 2-5, S. 9-12.*

SCHOOL OF EDUCATION

PROFESSOR JUDD, DIRECTOR.

PROFESSOR STIVERS

PROFESSOR WORLEY

PROFESSOR —————

To meet a general demand for teachers, principals, supervisors, and superintendents for the public schools of Alabama the Board of Trustees established in 1915 a Department of Education. This action of the trustees met an immediate and hearty response from the student body. More than fifty students registered in the department the first year. Since that time the enrollment has steadily increased and this year numbers 218. In the beginning training was specifically for the *secondary* field only.

VOCATIONAL AGRICULTURE.

Upon the enactment of the Smith-Hughes bill by the Federal Congress, departments of vocational agriculture began to be established in the district agricultural schools, in the county high schools, and in the consolidated rural schools of the State. There was an immediate demand for trained teachers of vocational agriculture and the Alabama Polytechnic Institute was designated by the State Board for Vocational Education to train teachers for this new field.

SCHOOL OF EDUCATION.

To meet the growing demand for teacher-training both in the general field of *secondary* education and in the field of vocational agriculture, the college enlarged and reorganized its Department of Education into a School of Education and instituted degree courses. Three types of students are provided for: Students in academic subjects and in agriculture who wish to do a sufficient amount of professional work to entitle them to the degree of Bachelor of Science in Education or Bachelor of Science in Agricultural Education; and students who wish to elect certain courses in education as liberal studies.

DEGREE COURSES.

BACHELOR OF SCIENCE IN EDUCATION.

The course leading to the degree of Bachelor of Science in Education is open to all students, men and women, who are duly accredited for college entrance. The course of study is organized for the four years and students who expect to become high school teachers should matriculate in the School of Education upon entering college. However, students may en-

ter the education courses at the beginning of the sophomore year or even as late as the junior year; provided psychology, a sophomore study, is made up. •

REQUIREMENTS FOR DEGREE.

Two hundred and forty credit term hours exclusive of physical and military training are required for this degree. Of this number thirty are selected in the Department of Education. Additional educational courses may be elected. The demand in the secondary field is that teachers shall have special ability to teach a limited number of subjects. A wide range of electives is allowed in order that students may group their studies with the view of attaining scholarship sufficient to serve as a basis for professional training and for effective teaching in these subjects.

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION.

For the degree of Bachelor of Science in Agricultural Education the course of study is prescribed. Below the senior class the studies are in the main the same as those prescribed for agricultural students, except that certain academic studies give place to subjects in education. Regular students in agriculture have opportunity in the senior year of specializing in the fields of agronomy, horticulture, animal husbandry, and botany.

Students who wish to prepare for teaching vocational agriculture should register in the School of Education at the beginning of the freshman year, but registration may be made as late as the opening of the sophomore or junior year. Thirty credit term hours in education are required. Additional hours in education may be elected.

FEDERAL AID

Under the provision of the Smith-Hughes act and the subsequent act of the Alabama Board for Vocational Education, the salaries of all instructors who devote their time exclusively to professional subjects in vocational agriculture are paid out of a fund derived from Federal and State sources. Under restrictions imposed by these two acts, instruction in professional vocational agricultural subjects is open only to students registered in the College of Agriculture and who indicate their intention of preparing to teach vocational agriculture.

STATE TEACHER'S CERTIFICATE.

Graduates from the College with the degree of Bachelor of Science in Education and Bachelor of Science in Agricultural Education and other graduates who have had the required

courses in Education will be entitled to receive, upon recommendation of the Director of the School of Education and upon the payment of a fee of two dollars, the first grade State Teacher's Certificate, good for a period of six years and renewable for life.

DEMAND FOR TEACHERS.

The demand upon the College for teachers in both the general secondary field and in vocational agriculture is far greater than it can supply. Salaries are more liberal than formerly and range from one thousand to twenty-five hundred dollars.

COURSES OF INSTRUCTION.

201. Psychology: The aim of this course is to introduce the student to the subject matter and methods of general psychology. It is required as the first course of all students in education. *M. W. F. 9-10, first term.*

202. Educational psychology: This course will present first the general problems and scope of educational psychology. It will then consider: The native equipment of human beings: the psychology of learning in general and as applied to school subjects. Required as the second course for all students in education. *M. W. F. 9-10, second and third terms.*

301. History of education: After reviewing the European back ground this course will trace the development of public education in the United States from its beginning to the present time. *T. and Th. 12-1, first term.*

302. Theory of education: The following will indicate the scope and content of this course: first—The various conceptions of the aim of education, education as a factor in organic and social evolution. The process of education in the individual, and the educational agencies; second—The various concepts of the relations of the individual and society. The aim of education. The nature of the social process. The powers and capacities of the individual determining development. The curriculum as a means of socializing the individual, and the school as a social organization; third—The origin, function, content, and organization of the curriculum and the principles by which subject matter may be evaluated for curriculum purposes. Required of students in *secondary education*. *T. and Th. 9-10, second and third terms.*

303. Rural sociology: A discussion of the social conditions affecting the rural community, the movements of population, farmers' economic and social organizations, rural health, the rural school, the rural church, and other topics of equal importance. Required of juniors in *agricultural education*. *M. W. F. 12-1, first term.*

304. Rural economics: In this course problems pertaining to the economic welfare of the farmer will be considered. Some of the topics to be studied are: the economic motives in agriculture, the choice of crops, the size of farms, farm credit, farm ownership and tenancy, marketing and the middleman. Required of juniors in *agricultural education*. M. W. F. 12-1, *second and third terms*.

305. History of agricultural education: In this course a study of the development of agricultural education is made including a detailed study of the different acts pertaining to agricultural education passed by Congress. Required of juniors in *agricultural education*. M. F. 8-9, *first term*.

306. Organization and administration of agricultural instruction: This course includes a study of the organization of agricultural courses, the arrangement of schedules and problems of class administration. Required of juniors in *agricultural education*. M. F. 8-9, *second and third terms*.

307. Vocational education: The development of vocational education, the demand for the practical and the response on the part of the schools, vocational schools, pre-vocational courses, and vocational guidance. Elective for students in *agricultural education*. M. F. 9-10, *the year*.

401. Principles of secondary education: This course will constitute a consideration of the following topics: The secondary school pupil with reference to his physical and mental traits and with reference to individual differences. The character and classification of the secondary school population. The secondary school with reference to its purpose, development, and relationships. The means and materials of secondary education. Required of students in *secondary education*. M. W. F. 10-11, *first term*.

402. Methods of teaching in high schools: The following topics will be considered: Purposes of high school instruction; classroom management; selection and arrangement of subject matter; types of learning; interests and economy in learning; instruction and individual differences; supervised study; methods in class teaching; practice teaching and lesson planning; measuring results of teaching. Required of students in *secondary education*. M. W. F. 10-11, *second and third terms*.

403. School supervision: This course will deal particularly with modern methods of checking classroom efficiency and of assisting teachers to overcome weaknesses in class teaching. The value and use of the intelligence test and of tests of progress in the various school subjects will receive attention. T. and Th. 10-11, *the session*.

404. Practicum in education: This course is an elective for seniors in *secondary education* and will afford opportunity to investigate specific educational situations and problems in Alabama. Their findings will afford data for their graduating thesis. *Hours will be arranged. Six term credits.*

405. Observation and practice teaching: Seniors in *secondary education* will be required to observe class teaching in the county high school, to make lesson plans, and to teach classes in subjects in which they are majoring. This work will be done as a part of the course in high school methods and within the time allotted to that subject.

406. Methods in teaching vocational agriculture: The purpose of this course is to acquaint the student with the best methods of teaching agriculture from a vocational point of view. The lesson plan, the home project, the project outline, the group project, the use of illustrative material, the cataloguing and use of bulletins and other reference material are some of the topics to be considered. Required of seniors in *agricultural education. M. W. F. 11-12, the year.*

407. Extra school activities: A discussion of the different community activities in which the agricultural teacher may take part and the organization of material which may be of aid to him in this work. Studies will be made of community clubs, short courses, community fairs, and other activities in which the teacher may co-operate with extension workers in their efforts to be of service to the farmers. Required of seniors in *agricultural education. T. Th. 8-9, first term.*

408. Observation and practice teaching: Students preparing to teach agriculture are required to observe the methods used in presenting the work to high school pupils. Two weeks of practice teaching is also required of each student. Opportunity for this work is offered by the vocational agricultural department of the Lee County High School. Required of seniors in *agricultural education. T. Th. 8-9, second and third terms.*

409. Practicum in agricultural education: Agricultural education offers many problems for the advanced student. A study of secondary courses in agriculture will be made with a view to determining their vocational adaptability. Community surveys as a basis for the organization of vocational courses in agriculture will be treated in detail. Elective for students in *agricultural education. T. Th. 10-11, the year.*

COLLEGE OF VETERINARY MEDICINE

By direction of the United States Civil Service Commission and Department of Agriculture, this college has been added to the list of accredited veterinary colleges, and placed in class A.

VETERINARY MEDICINE

PROFESSOR CARY.

ASSISTANT PROFESSOR MCADORY.

INSTRUCTOR FERGUSON.

INSTRUCTOR SUGG.

INSTRUCTOR POLLARD.

LECTURER WINTERS.

LECTURER WHITE.

VETERINARY MEDICINE

The four-year course in veterinary medicine leads to the degree of Doctor of Veterinary Medicine. It has been established to meet the demand of the young men of the South who desire to become educated veterinarians, and for students who desire to prepare for the study of human medicine.

COURSE OF STUDY.

The four-year veterinary course students take six terms of work in the department of animal husbandry and dairying, two terms of work in pharmacy; seven terms of work in the chemical department; two terms of work in botany, and one year's work in English. The facilities and equipment of these departments are excellent.

The veterinary course is especially strong in practical laboratory work.

1. In anatomy the work of dissection is continued through the first, second and third years. It is a well established fact that useful surgery or real anatomy cannot be acquired without careful and thorough work in the dissecting room. Special stress is given to comparative anatomy of the horse, ox, sheep, pig, dog and poultry.

2. Clinical laboratory work is also required throughout the course. The clinical work comes six days in the week and the cases presented embrace mules, horses, cattle, sheep, dogs, poultry, and hogs. The variety is such as to illustrate a large number of diseases, surgical operations, and therapeutic applications.

3. The physiological laboratory is supplied with apparatus for tests and experiments in physiology.

4. The laboratory for pathology, histology, and bacteriology is extensive, and is fully fitted with the latest apparatus. This laboratory has been the outgrowth of twenty-five years of cumulative additions. The aim is to teach students to work in the laboratory rather than to memorize the printed page of the text-book.

5. In chemistry and toxicology the students work in one of the best of chemical laboratories.

6. In pharmacy the students work in practical pharmacy for six hours a week for two terms. In this they learn to recognize, compound and dispense drugs.

7. The animal husbandry department affords ample facilities for practice in feeding and judging cattle, sheep, hogs, horses and mules.

8. The dairy department gives practical laboratory work in dairy operations and in handling and feeding dairy cattle.

9. The botanical department is well equipped and gives excellent opportunity for laboratory work in poisonous and medicinal plants.

10. The subjects in the course of study are such as are required in the leading veterinary colleges of America. The course meets the requirements of the American Veterinary Medical Association and the Bureau of Animal Industry and United States Civil Service Commission. It is the aim to have the teaching staff meet the requirements of the best standards. The length of the course is four years of nine months each.

Graduates of the College of Veterinary Medicine are admitted by civil service examination to the appointments in the service of the Bureau of Animal Industry of the United States Department of Agriculture and to the army, and also to membership in the American Veterinary Medical Association.

DESCRIPTION OF COURSES.

FRESHMAN CLASS.

101. Physiology: The students in all of the pharmacy courses, in the course in chemistry and metallurgy, and in the course of veterinary medicine and surgery, all study elementary physiology.

The aim of this course is to teach anatomy, histology, hygiene and sanitation. The instruction is given by lectures, demonstrations and text-book. *Two hours, entire session.*

102. Veterinary Science: Prescribed for freshman veterinary students and juniors in animal husbandry. Elective for all agricultural courses. The aim of the instruction is to teach such lessons as will enable them to prevent many diseases

on the farm by correct sanitation. At the same time they will be instructed in the ways and means of treating and handling the common diseases of farm animals. *Lectures two hours and clinics three hours. Veterinary students, first term; juniors in agriculture, entire session.*

103. General chemistry and chemical laboratory Chm 101, 205: *Recitations three hours, laboratory six hours, entire session.*

104. English composition and literature Eng. 101: *Three hours, entire session.*

106. Veterinary medicine: A course covering the internal diseases of solipeds, the horse, mule, ass. *Three hours, second and third terms.*

107. Anatomy: Consists chiefly of dissections with a few lectures and reviews. It covers during this year (a) Osteology, a study of the bones; (b) Arthology, a study of the articulations; (c) Myology, a study of the structure, form and relations, attachments and functions of muscles. *Ten hours, entire session.*

108. Histology: Treats of the minute or microscopic anatomy of the body. It includes fixing, imbedding, sectioning, mounting, staining and microscopic study of cellular and inter-cellular structure of tissues. It is taught by lectures; text-books and laboratory work. *Five hours, entire session.*

109. Judging dairy and beef cattle: It includes practical exercises in judging the breeds and types of dairy and beef cattle. This work is done by the animal husbandry department. *Two hours, first term.*

110. Judging swine and sheep (AH 103): This embraces practical exercises in determining the good and bad points of swine and sheep. *Two hours, second term.*

111. Judging horses and mules (AH 104): This consists of lectures and practical exercises in judging the various breeds and classes of horses and mules. *Two hours, third term.*

112. Clinics: This is a poly-clinic where all kinds of cases and all kinds of animals are clinically examined, studied, operated, and treated. *Three hours, entire session.*

SOPHOMORE CLASS.

213. Embryology: A study of the development of the embryo in its various stages from the fertilized ovum to the full grown embryo, and is designed to prepare students for the study of the principles of breeding and obstetrics. *Three hours, first term.*

214. Organic chemistry (Chm 202): This course, though somewhat more condensed, is similar to Chm 302 with

the exception that the latter part of the course is devoted to a special study of fats, carbohydrates and proteins, with reference to their function in the life processes of plants and animals. *Three hours, first and second terms.*

215. Anatomy: This covers (a) Internal organs; (b) blood vessels, heart, lymph vessels and lymph glands; (c) the nervous system; (d) special sense organs; (e) genito-urinary organs; (f) the foot; (g) the larynx. *Ten hours, entire session.*

216. Veterinary medicine: Embraces a study of the special pathology, etiology, symptoms, diagnosis and treatment of internal diseases of (a) cattle; (b) sheep and goats; (c) swine. *Three hours, entire session.*

217. Clinics: Surgical, internal and external diseases of all animals in the hospital and at the poly-clinic are examined, inspected and studied and recorded by the students. *Eight hours, entire session.*

218. Bacteriology: Includes a study of the pathogenic bacteria, their classification, modes of reproduction, cultural and staining characters, habits, methods of causing diseases etc. *Six hours, entire session.*

219. Physiological chemistry: Treats of the chemistry of sera, globulins, proteids in the other organic bodies or compounds found in animal bodies. *Four hours, third term.*

220. Pharmacy: Treats of the physical and chemical characters of drugs, preparation of various official drugs and the compounding of prescriptions employed in veterinary practice. *Six hours, second and third terms.*

221. Botany: A study of poisonous and medicinal plants. *Five hours, first and third terms.*

JUNIOR CLASS.

322. Surgery: This embraces general and special surgery of domestic animals. *Four hours, entire session.*

323. Obstetrics: It embraces the study of the normal and diseased conditions of the animal body during pregnancy. *Three hours, second and third terms.*

324. Anatomy: Embraces the comparative anatomy of the (a) ox; (b) sheep; (c) swine; (d) dog; (e) cat; (f) poultry. *Ten hours, entire session.*

325. Embryology: A study of the development of the embryo in its various stages from the fertilized ovum to the full grown embryo, and is designed to prepare students for the study of the principles of breeding and obstetrics. *Three hours, first term.*

326. Veterinary medicine: This course treats of the internal diseases of the (a) dog; (b) the cat; (c) poultry. *Three hours, first term; four hours, second and third terms.*

327. Veterinary physiology: Treats of normal actions or functions of the organs and apparatus of the bodies of domestic animals in health. *Three hours, first and third terms; four hours, second term.*

328. Clinics: A study of general and special surgical and medical cases presented at the hospital and poly-clinic. *Ten hours, entire session.*

329. Infectious diseases: Embraces a study of the causes, modes of transmission, methods of diagnosis and prevention of communicable diseases of domestic animals. *Three hours, second and third terms.*

330. Shoeing: Consists in a study of normal and pathological shoeing of horses and mules. *Four hours, first term.*

331. Clinical diagnosis: Takes up the practical and laboratory methods of making clinical diagnosis of various diseases.

SENIOR CLASS.

431. Therapeutics: A study of all materials used in disease and considers the action of these materials or drugs during health and in diseases, and their applications or uses in diseases. *Five hours, first and second terms.*

432. Principles of breeding (AH 410): Embraces the principles and practices involved in the improvement of domestic animals. The subjects of reproduction, variation, selection, heredity, grading up, etc., will be discussed in their relations to practical breeding problems. *Two hours, first term.*

433. Dairying (AH 411): The study of the secretion, character, composition and production of milk is made; proper methods of handling milk and cream for consumption, pasteurizing and sterilizing are covered. Students are taught how to use the Babcock test, the lactometer, and to test for lactic acid, for purity and adulterants. They are drilled in butter making and in standardizing milk and cream. Familiarity with the construction, care and operation of the leading makes of cream separators and other dairy equipment is required. *Four hours, second term.*

435. Surgery: This will be a continuation of special surgery, foot diseases and lameness. *Two hours, first term.*

434. Feeding: Embraces the food requirements for different animals; calculations and mixing of rations, using the various concentrates, roughages, etc. *Three hours, third term.*

436. Clinics: Includes special and poly-clinic cases in surgery, internal medicine, infectious diseases, lameness, etc. *Eight hours, entire session.*

437. Pathology: Deals with the anatomy and histology of diseased tissues and organs. The cellular and inter-cellular changes that occur in diseases are studied in text-book and lectures, and in the laboratory diseased cells and tissues are examined macroscopically and microscopically. *Seven hours, first term; eight hours, second term.*

438. Meat Inspection: A study of the ante-mortem and post-mortem conditions of healthy and diseased animals. The decomposition, putrefaction and fermentation and adulteration of meats are studied. This course embraces lectures, text-book work and laboratory work in class room and slaughter house. Auburn now has a well built and equipped slaughter house. *Three hours, first and second terms.*

439. Milk inspection: Includes a study of diseases of dairy cattle (tuberculosis, udder diseases, etc.,) filth, bacteria and adulterants of milk; feed, water supply, dairy barns, pens and pastures; dairy cans, buckets, bottles, wagons, pasteurizers, sterilizers, milk houses, and milkers. *Five hours, third term.*

440. Parasites: This course deals with the plant and animal parasites that infest man and animals. The hosts, anatomy, classification, modes of life, life history, toxic and other effects on hosts are studied. Specimens are collected, classified, mounted or preserved. *Three hours, second and third terms.*

441. Surgical exercises: This consists of a series of practical exercises covering the most common surgical operations. *Three hours, third term.*

443. Thesis: Every student must develop a thesis on some veterinary subject, and this thesis must contain some original investigation. *Three to four hours, entire session.*

444. Toxicology and urinalysis (Agr. 110e): Embraces a study of the actions of poisons on animals, and a laboratory course in the official test for the different poisons and analysis of urine. *Six hours, third term.*

GENERAL INFORMATION

CADET BAND

A. L. THOMAS, Faculty Manager.

P. R. BIDEZ, Bandmaster.

J. M. LINX, Instructor.

The band is maintained by the college for those students who wish to learn music and for those who wish to develop further their musical ability. The band furnishes music for many college exercises and takes part in military manoeuvres. Regular instruction which embodies instruction in the rudiments of music, in general musical information, and in the use of band instruments is given free of charge at the band practice periods. Private instruction may be secured by the payment of a nominal fee.

Public concerts are given frequently and engagements in the state and in other parts of the South are often scheduled.

Membership is open to all students, but is especially attractive to young musicians who have already had some training. Gold medals are given annually to those who show unusual progress and proficiency and other rewards are open to those who attain a recognized standing of loyalty and excellence.

Since its organization in 1899, the band has trained hundreds of student musicians and has become one of the best known musical organizations in the South.

THE ORCHESTRA.

The orchestra is an organization of students who play orchestral instruments and its size is limited only by the attainments and proficiency of the applicants for membership. Besides furnishing music for college exercises, its members find many opportunities of earning small sums by playing at banquets, dances, and other entertainments.

In connection with the orchestra practice and study, a course in harmony, counterpoint, and composition is offered for those students who wish to take advanced work in music. A certificate of proficiency may be obtained for satisfactory progress in the course.

THE GLEE CLUB.

The Auburn Glee Club is an organization of thirty or forty student musicians who are interested in chorus singing, quartet work, and musical specialties of all kinds including skill in playing stringed instruments not used in the band or in the

orchestra. Training under a competent director begins early in the session and continues throughout the year. Several trips to towns in the state and to other states are taken during the year and those who attain a recognized standard of proficiency and go with the club on these trips are given suitable rewards including under certain conditions a certificate of musician-ship.

PUBLIC LECTURES AND ENTERTAINMENT

In addition to a number of lectures by visiting speakers from time to time during the college session the college provides a program including recitals by visiting musicians, lectures by well known thinkers, and other forms of entertainment for which the student pays a small fee. Among the visitors for the past session were Richard Burton of the University of Minnesota and Frieda Hempel of the Metropolitan Opera Company.

When no other program interferes, carefully selected moving picture plays are available in the college auditorium for the recreation and entertainment of students. Educational films of military, agricultural, economic, engineering, literary interest are shown almost weekly.

A pipe-organ will be installed in the auditorium during the coming summer and will greatly increase the opportunities for the enjoyment of good music.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This association is regularly organized and a suite of well furnished rooms has been secured for its exclusive use. Through its weekly meetings and Bible Study Classes it exerts a wholesome Christian influence among the students.

Students are advised to unite with the association when they enter the college.

LITERARY SOCIETIES

There are two literary societies connected with the Institute—the Wirt and the Westernian. Each has a hall in the main building. These societies hold celebrations on the evenings of Thanksgiving and 22nd of February.

To encourage the literary societies the trustees have directed that a medal be awarded at Commencement to the member of each society who is both efficient and regular in attendance, and who is the best debater. The method of selection is determined by the faculty.

SOCIETY OF THE ALUMNI.

The annual alumni oration is delivered by a member of the society in Langdon Hall on Alumni Day, Monday of Commencement week.

OFFICERS OF THE ALUMNI ASSOCIATION.

Lieutenant General Robert Lee Bullard, '82, Washington,

D. C. -----	Alumni Orator
Thomas Bragg '01, Auburn, Ala. -----	President
H. M. Martin '14, Auburn, Ala. -----	Sec'y. and Treas.

ENGINEERING SOCIETIES.

All students registered in the engineering division are eligible to membership in one or more of the technical and engineering societies that have been organized. The purpose of these organizations is to promote personal fellowship among the members, and a closer affiliation among practical engineers. Prominent engineers are invited from time to time to address these bodies, either singly or in groups, and educational films, lantern slides, discussions by student members make up the programs. The following are in active operation:

Student Branch of the American Institute of Electrical Engineers. Organized and carried on by students in the electrical engineering course. Meetings twice a month.

Student Branch of the American Society of Mechanical Engineers. Organized and carried on by students in the mechanical engineering course. Meetings twice a month.

Seminar for Civil Engineers. Provided for students in the course in civil engineering. Meetings weekly.

Chemical Society. Organized and carried on by students in chemical engineering and other chemical courses. Meetings twice a month.

ARCHITECTURAL ASSOCIATION.

The Architectural Association is open to all members of the college who take work in the department of architecture. Bi-weekly meetings are held in the architectural library, and papers presented on subjects of professional interest, not directly covered in regular courses; the discussions that follow are always lively ones. Current articles in the technical journals are also taken up. Nothing could furnish a more striking example of the enthusiastic attitude shown by architectural students everywhere toward their chosen work, than these gatherings of the architectural association.

AGRICULTURAL CLUB.

The Agricultural Club was organized in 1907. All students interested in agriculture and the agricultural sciences are eligible for membership. The members of the Agricultural

Faculty take an active part in the work of the club. Meetings are held once a week, and an effort is made to promote interest in all lines of agriculture, to develop a spirit of good fellowship among the students of the course, and bring them in contact with prominent workers of the science as opportunity offers to present them on the regular program.

Meetings are held in the club rooms in Comer Agricultural Hall.

VETERINARY MEDICAL ASSOCIATION.

The Veterinary Medical Association was organized in 1907. The meetings are held bi-weekly in the veterinary building. Medical subjects are discussed by the members or by some invited speaker or member of the veterinary faculty. All students of the Veterinary College are eligible to membership. The objects of the association are fraternal, intellectual and cultural. The annual banquet of this association is an occasion of good fellowship for the students, faculty, and veterinary alumni.

PHARMACEUTICAL ASSOCIATION.

The Pharmaceutical Association is an organization maintained by the students of the department of pharmacy. It aims to cultivate a spirit of fraternity and friendship among its members. Meetings are held bi-monthly. At these meetings the membership is usually addressed by local or visiting speakers. Student programs are also prepared. The annual banquet is held in April.

PHI KAPPA PHI HONOR SOCIETY.

The Phi Kappa Phi Honor Society is a national honor society organized for the purpose of encouraging scholarship and original study among students. Seniors who make a high average on all subjects during the first three years of their course are eligible if they can meet requirements as to character and to individual initiative as demonstrated by usefulness and prominence in worthy student and other collegiate activities. Leadership is given most consideration if students pass the scholarship requirements.

The society gives a prize of ten dollars to the sophomore student who has attended the Alabama Polytechnic Institute for two years and who has, in the opinion of the Society, the best record in scholarship, character, and worthy student activities. The first award will be made by a committee of the Society in June, 1921.

THE DRAMATIC CLUB.

The Dramatic Club is an organization of students interested in the presentation of plays and in the theater. Membership is open to all students who have had some acting experience and to those who show theatrical talent. Two plays were presented during the past session and another has been selected for presentation in the fall.

EXAMINATIONS.

Written examinations on the studies of the first half-term are held in October. Each examination occupies one hour.

At the end of each term written examinations, or written and oral, are held on the studies passed over that term.

It is required that every student who enters college shall remain through the examinations at the end of the term. Leaves of absence and honorable discharges will, therefore, not be granted within three weeks of the examination except for providential reasons.

Each term's work shall stand on its own basis and not be averaged with any other term's work. Students must pass on *each term's work*. In order to do this they must make 60 (Graduates 75) on the combination of class standing and term examination. Each professor may combine the class standing and the examination grade in any proportion he chooses.

DEFERRED EXAMINATIONS.

A student absent from a term examination on account of sickness or official or collegiate business may be given an examination at any time agreed upon by the professor concerned. A student absent from an examination without such satisfactory excuse may obtain a special examination only on an application endorsed by the professor and approved by the Faculty. In either case the examination should be put at some period that does not conflict with the student's other college work.

RE-EXAMINATIONS.

A failure on any term's work shall be made up at any date set by the professor. This date should be at some time during the third week of the next term. If necessary, however, it may be set later by the professor. In either case it should be put at some period that does not conflict with the student's college duties.

A student whose term grade falls below 50 will be required to repeat the term's work in that subject in class, unless an application for a re-examination is endorsed by the professor, and is approved by the Faculty.

Only one re-examination will be given on any term's work within one school year except by special permission of the Faculty. Seniors who fail in more than one subject of the third term of the senior year will not be permitted to stand re-examination before Commencement. No re-examination of a senior class student who is applying for a degree may be held later than the Saturday just preceding Commencement Sunday. Re-examination for deficiencies incurred by students before entering the senior class shall be set not later than the first week in April, except when deficiencies are being made up in class.

The grade of a student who stands a re-examination and passes shall be recorded as 60.

DISCIPLINE REGULATIONS.

The government of the college is administered by the president and faculty in accordance with the code of laws and regulations enacted by the trustees.

Each student upon entering is required to pledge himself to obey the rules and regulations of the college.

All students are required to wear the *prescribed* uniform.

Attention to study and punctuality in attendance on recitations and all other duties are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using or causing to be brought into the college limits, intoxicating liquors.

Students are not permitted to participate in public entertainments or contests without previously obtaining the consent of the faculty.

No student will be permitted without the approval of his parent or guardian to take part in a public game of football.

No student who has failed in two or more subjects will be permitted to be absent from college for athletic contests or other purposes.

Every absence from recitations or examination is graded zero.

Only sickness, as reported by the surgeon, or absence by reason of family sickness, or official or collegiate business, will constitute a satisfactory excuse for absence from college work.

When a student is called away from college by his parents for reasons other than those specified above, his zeros for absence are not removed.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

MILITARY TRAINING.

RESERVE OFFICERS' TRAINING CORPS.

Military training has been given in the institution since its establishment in 1872. In accordance with the Act of Congress, June 3, 1916, a senior division of the Reserve Officers' Training Corps is organized, instruction being given in field artillery, infantry, and military engineering. Each member of the corps is issued a uniform by the United States War Department.

All members of the freshman and sophomore classes and all first and second year students, except those physically disqualified are required to take this military training. Married students and also students over twenty-one years of age *at the time of entering college* who are permitted to devote their time to special study in chemistry, agriculture, pharmacy, veterinary medicine, etc., may be excused provided they take approved equivalent work. Juniors and seniors who, with approval of the President and Professor of Military Science and Tactics, take the advanced course will receive in addition to the uniform issued by the government pay for subsistence which at present amounts to \$12.00 per month. Members of the junior and senior classes who do not take the R. O. T. C. will be required to take an approved equivalent.

No obligation to perform military service after graduation is incurred by the student.

RELIGIOUS SERVICES.

Religious services are held every morning in the chapel.

All students, unless excused on the written request of parents for religious scruples, are required to attend these exercises, and also to attend the church of their choice on Sunday morning.

Opportunities are also offered for attending Bible classes every Sunday.

DISTINCTIONS AND HONORS.

Certificates of highest distinction and of distinction are given on the basis of credits, one credit being considered as the equivalent of one recitation per week for one term. Two hours of laboratory or shop work or drawing are counted as one hour of recitation. An undergraduate student taking less than an average of eighteen credit hours per term will not be eligible for distinction. Certificates will be awarded to those students who have not received more than forty demerits, and who comply with the scholarship requirements announced by the faculty.

Members of the senior class who attain highest distinction are published as *Graduates with Highest Honor*; those who attain distinction are published as *Graduates with Honor*; seniors who do not attain distinction, but who attain a grade of sixty per cent or above are published as *Graduates*.

RECORDS AND REPORTS.

Daily records of the various exercises of the classes are kept by the officers of instruction.

At the close of each term and at regular intervals reports giving the grade made by each student are sent to the parent or guardian.

HONOR SYSTEM.

During the session of 1910-11 the Honor System, which for years had been in effect in the higher classes, was adopted by the entire student-body of the institute, to apply to all work done in class rooms and on examinations. Under this system the student is pledged neither to give nor receive any assistance, whatsoever.

All students upon entrance subscribe to the Honor System as in force at this institution.

Proper regulations for administering the system have been adopted by the student-body.

The spirit of truth and honor, thus fostered in the examination room, is an efficient means of raising the scholarship, and tends to inculcate high ideals of honor among the students,

SCHOLARSHIPS.

The following scholarships and prizes have been established:

THE WILLIAM LEROY BROWN MEMORIAL SCHOLARSHIP OF \$170, established by the Alumni Society, in memory of the late distinguished president of the Institute.

THE LIGON SCHOLARSHIP OF \$170, established by Col. R. F. Ligon, Montgomery, Ala.

THE THOMAS SCHOLARSHIP OF \$170, established by Judge William H. Thomas, Montgomery, Ala.

THE BALL SCHOLARSHIP OF \$170, established by Mr. Fred S. Ball, Montgomery, Ala.

THE DUNKLIN SCHOLARSHIP OF \$600, established by Mr. and Mrs. J. C. Street, Opelika, Ala., in memory of Prof. J. T. Dunklin, former professor of Latin in the college.

THE 1908 SCHOLARSHIP OF \$150, established by the Class of 1908.

THE ALICE CARR SCHOLARSHIP OF \$180, established for young women by the late Miss Alice Carr, Auburn, Ala.

THE RANSOM MEMORIAL SCHOLARSHIP OF \$125, per year, established by the Alumni Association in memory of the late Prof. A. McB. Ransom, is available for students in the junior and senior classes of the course in chemistry and metallurgy.

THE JEWISH LOAN SCHOLARSHIP OF \$1,000, established by a former student of the college.

TWO HENDERSON SCHOLARSHIPS OF \$100 each, established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE SIDNEY SMITH MEMORIAL SCHOLARSHIP OF \$100, established by his parents, Mr. and Mrs. Smith, Bessemer, Ala.

THE C. S. YARBROUGH SCHOLARSHIP OF \$1,000 established by Dr. C. S. Yarbrough, Auburn, Ala.

A scholarship has been established for worthy musicians who are in need of assistance in defraying their college expenses.

THE ALABAMA FEDERATION LOAN SCHOLARSHIP OF \$200 *annually*, established in 1917 by the Alabama Federation of Women's Clubs.

The conditions governing the award of this scholarship are as follows:

(a) The beneficiary shall be a young woman resident of Alabama, between the ages of 18 and 24 years, prepared to enter the junior class.

(b) She must be unable to complete her education without financial assistance.

(c) She must maintain the required standard in scholarship, attendance and conduct. Failing in any of these requirements, she may be replaced by another beneficiary appointed in the same manner.

(d) The beneficiary must be free from any other financial obligation.

(e) Repayment of this loan shall be made at the rate of \$100.00 a year, without interest, the first payment becoming due the first year after graduation or resignation.

(f) The beneficiary shall signify her perfect understanding of these terms by signing a paper of agreement to be presented to her by the President of the Alabama Polytechnic Institute.

All applications should be sent to the Chairman of the Federation Scholarship Committee, Mrs. C. Clifford Adams, 3421 Willow Avenue, Birmingham, Alabama.

The scholarships enumerated above are loan scholarships, granted to worthy young men and women, to be returned after graduation.

THE ROBERT E. LEE MEMORIAL SCHOLARSHIP OF \$100, an annual donation for the son of a Confederate veteran, established by the Children of the Confederacy of Alabama under the auspices of Mrs. Mary G. Pickens.

THE UNITED DAUGHTERS OF THE CONFEDERACY LOAN SCHOLARSHIP OF \$100, established in 1908 by the Alabama Division of the United Daughters of the Confederacy to be awarded by a committee of the Division to a descendant of a Confederate veteran.

The above named scholarships and ten other scholarships are administered by the Alumni Society. (*For information, address H. M. Martin, Secretary.*)

THE GRAYDON SCHOLARSHIP FUND OF \$3,000 established by the family of the late Augustus T. Graydon, of South Carolina, a loyal alumnus of the class of 1914.

SOUTHERN RAILWAY LOAN SCHOLARSHIP OF \$1,000, established by the Southern Railway in memory of the late W. W. Finley, President of the Southern Railway.

PRIZES.

THE THOMAS ESSAY PRIZE, a gold medal offered by Hon. William H. Thomas, of Montgomery, Ala., for the best essay by an undergraduate student of the college. The essay must be written under the supervision of the department of English, 1919; *Roy Hope Turner*, Tallapoosa County.

The Alabama Chapter of the American Institute of Architects offers an Annual prize of Twenty Dollars worth of Architectural Books, to students in the courses of Architecture or Architectural Engineering. The basis of the competition varies from year to year and is determined by the Department of Architecture, in consultation with the officers of the Alabama Chapter. The subject for 1919 was the "Development of A Small Country Estate," with working drawings for the main residence building. 1919: *Edwin Bragg Lancaster*, Sumter County.

THE MILLER REESE HUTCHISON MEDAL FOR ENGINEERING WRITING: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison, of Orange, N. J., to the member of the senior class who does the most satisfactory work in the course of Engineering Writing. The work must be done under the supervision of the Department of Machine Design. 1919: *Raymond Boone Kelly*, Jefferson County.

THE MILLER REESE HUTCHISON MEDAL FOR INVENTIVE DESIGN: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison, of Orange, N. J., to the member of the junior class who does the most satisfactory work in the course of Inventive Design. The work must be original and must be done under the supervision of the Department of Machine Design. 1919: *Melton Winship Kyser*, Elmore County.

THE ORATORICAL PRIZE, medal to that member of the junior class who composed and delivered the best oration on junior class day of Commencement.

THE J. B. CLARK DEBATER'S MEDAL, established in 1919 by J. B. Clark, Secretary Board of Examiners, State Department of Education, Montgomery, Alabama, to be awarded annually to the best debater in the junior class. 1919: *Joseph Chandler Burton*, Marion County.

THE ORATORICAL PRIZE, for the Annual Inter-Literary Society Contest, February 22.

PRIZE FOR BEST DEBATER, a medal given annually by the Board of Trustees to the best debater in the Wirt and Westerman Literary Societies each. 1919: *Wirt—Milton Oliver Howle*, Jefferson County.

BEST DECLAMER IN LITERARY SOCIETIES. 1919: *Wirt—Fox Howe*, Montgomery County.

REGIMENTAL MEDAL, for the best drilled soldier. 1919: *John Thomas Frazer*, Chambers County.

PRIZE FOR BEST DRILLED COMPANY, a sword given by Board of Trustees. 1919: *John Patrick Sullivan*, South Carolina.

MUSIC MEDAL. 1919: *George A. Mattison*, Clay County.

LIBRARY.

LIBRARIAN, MISS MARY MARTIN.

ASSISTANT GARNER.

ASSISTANT MISS DRAKE.

The beautiful Carnegie Library building is constructed of stone and pressed brick. The reading room is 80 x 40 feet, and the building is equipped with every convenience. It is lighted by electricity and heated by steam. The capacity of the stack room is 60,000 volumes. The library now contains 30,000 volumes, including valuable reference and scientific books, with select editions of standard authors, and others suitable for students, carefully and recently selected. It is kept open nine hours daily for the use of students as a reading room and is thus made an important educational feature.

THE O. D. SMITH COLLECTION.

The library of the late Prof O. D. Smith was presented to the college by Mrs. O. D. Smith, and is preserved as a memorial to his long and distinguished services to the college.

THE F. D. PEABODY MEMORIAL ROOM

Through the generosity of Mr. George Foster Peabody, New York City, an annual fund of fifty dollars, income from a per-

manent investment, is available for the purchase of books and furniture for the "F. D. Peabody Memorial Historical Seminary." F. D. Peabody, Esq., was a distinguished graduate of the Class of 1876.

THE W. D. TAYLOR MEMORIAL COLLECTION.

The engineering library of the late W. D. Taylor, chief engineer of the Chicago and Alton Railway, was bequeathed by him to the Alabama Polytechnic Institute, and is preserved by the College as a memorial to this distinguished alumnus. Mr. Taylor was a graduate of the Class of '81, and was regarded as one of the leading civil engineers of the United States.

THESIS

Each applicant for a degree may be required to write and submit a thesis on some leading subject connected with his course of study, or, in lieu thereof, may conduct special laboratory or research work relating to such subject under the professor in charge in accordance with regulations prescribed by the Faculty.

SURGEON.

The Surgeon is required to be present at the college daily, to visit at their quarters the cadets that are reported sick, and give all requisite medical attention without other charge than the regular medical fee, paid on entering the Institute.

An infirmary has been established and equipped.

LOCATION.

The Institute is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railway of Alabama.

The region is high and healthful, noted for its general good health and freedom from malaria, having an elevation of eight hundred and twenty-six feet above tidewater.

ACADEMIC YEAR.

The academic year for 1920-21 commences on Wednesday, September 8, 1920, and ends on Tuesday, May 31, 1921, which is Commencement Day.

It is divided into three terms: The first term extends from the opening of the session to December 22nd; the second term begins January 4th and ends March 20th; the third term continues to the end of the session.

EXPENSES

College Fees. The fees for the next session as fixed by the Board of Trustees are: Matriculation, incidental, library and medical fees, \$24.00.

Student Activities Fee. This fee is \$11.00, of which \$6.00 is for support of athletics and for admission to games played on the campus. The remainder of \$5.00 is for the student annual, college paper and lecture course.

Non-Residents. An additional matriculation fee of \$36.00 per session is charged students who are not residents of Alabama, unless remitted by the trustees to worthy students upon the recommendation of the faculty. A student once entering as a non-resident will not be permitted to claim residence unless his parent or guardian becomes a resident or tax payer on property in Alabama. The non-resident fee is remitted to sons of ministers of the Gospel and in the form of a free scholarship to those students who obtained a distinction the preceding session, or who, by reason of merit, are deemed worthy.

Fees are payable in two installments, one-half when the student registers for the first term and one-half at the beginning of the second term.

Contingent Deposit. A contingent deposit of \$5.00 is required of each student on matriculation to cover any special or general damage to the college property for which he may be liable. General damages are assessed on the body of students.

At the close of the session the contingent deposit, less charges, is refunded to the student.

Laundry. The authorities of the college have made contract for the laundry of the students. The charge for the first term is \$7.00 and each student must pay this fee on matriculation. The fee for the second and third terms is \$10.50.

Laboratory Fees. In addition to the above fees paid by all students, laboratory fees are charged in certain courses to cover cost of materials, use of equipment, etc. The cost per student is dependent upon the number of such courses which he carries. Laboratory fees for courses covering the entire year are payable in two equal installments, one at the beginning of the college year and the other at the beginning of the second term. Fees for courses covering a single term are payable at the beginning of that term. The courses for which laboratory fees are charged are shown on the next page.

Boarding. Students board at Smith Dining Hall or with families of the town of Auburn. The cost of board and lodging varies from \$25.00 to \$30.00 per month. Students who desire to reserve rooms in the Dining Hall or College cottages

should make application before September 1st. On request the Registrar will make reservations with private boarding houses.

Funds of Students. Parents or guardians are advised to deposit with the treasurer of the college all funds desired for sons or wards, whether for college fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands and to pay all expenses incurred by the students, including board, books, etc.

The college cannot be held responsible for the expenses of a student unless the funds are deposited under specific instructions from the parent or guardian to the treasurer. No student should be permitted to have a large amount of pocket money, as it brings only trouble, and encourages idleness.

AMOUNT TO BE PAID ON REGISTRATION

	1st term	2nd term
Fees (matriculation, incidental, library and medical) ----	\$12.00	\$12.00
Student Activities fee-----	5.50	5.50
	<hr/>	<hr/>
Laundry -----	\$17.50	\$17.50
*Contingent deposit -----	7.00	10.50
	<hr/>	<hr/>
For residents of Alabama ----	\$29.50	\$29.50
Special matriculation fee for non-residents -----	18.00	18.00
	<hr/>	<hr/>
Non-residents of Alabama ----	\$47.50	\$46.00

*The contingent deposit of \$5.00 will be required in the second term of students who were not registered during the first term.

The above summary does not include laboratory fees.

By order of the Trustees only the remainder of the laundry fee and the contingent fee, less charges, may be returned to students who withdraw. No laboratory fee may be returned.

LABORATORY FEES.

Laboratory fees for courses covering the entire year are payable in two equal installments, one at the beginning of the college year and the other at the beginning of the second term. Fees for courses covering a single term are payable at the beginning of that term.

Each student in the courses listed below is required to pay the laboratory fee specified. Special students pursuing laboratory courses requiring more time and materials than the prescribed courses may be charged a proportionately larger laboratory fee.

Agricultural Engineering:	
Courses 301, 402, 403 each -----	\$ 3.00
Courses 404, 405, 406 each -----	2.00
Agronomy:	
Courses 101, 202, 301 each -----	2.00
Soils Agr. 403 -----	5.00
Animal Husbandry:	
Dairying -----	3.00
Architecture and Architectural Engineering:	
Each student -----	5.00
Botany:	
Courses 201, 202 each -----	5.00
Courses 203, 305 each -----	3.00
Course 304 -----	2.00
Chemistry:	
Sophomore, junior and senior chemical laboratory, each -----	10.00
Toxicology as a separate course -----	3.00
Mineralogy -----	2.00
Civil Engineering:	
Courses 432, 433, 434 -----	3.00
Surveying field work courses, per term -----	1.00
Electrical Engineering:	
Junior courses 310, 311 and 312 -----	5.00
Senior course 424 -----	5.00
Entomology:	
General Entomology course 301 -----	2.00
Bee culture, entomology of disease, and economic entomology 302, 402, 403 each -----	1.00
Highway engineering:	
Courses 331, 332 and 333 -----	5.00
Horticulture:	
Courses 101, 402 each -----	1.00
Course 303 -----	2.00
Course 401 -----	3.00
Mechanical engineering:	
Freshman shop courses 101, 102, and 103 -----	3.00
Sophomore and junior shop courses 214 -----	5.00
Senior mechanical engineering courses 451, 452 and 453 -----	5.00

Senior mechanical engineering for students in	
electrical engineering 451 and 453 -----	4.00
Auto mechanics course -----	12.00
Military:	
R. O. T. C. -----	2.00
Pharmacy:	
Juniors and veterinary students -----	10.00
Seniors -----	15.00
Physics:	
Course 203 -----	4.00
Veterinary Medicine:	
Dissecting fee -----	10.00
Bacteriology Vet 218 -----	3.00
Zoology:	
Course 201 -----	4.00
Courses 201, 202 -----	5.00

REGISTER

MILITARY ORGANIZATION. SESSION 1919-1920

RESERVE OFFICERS' TRAINING CORPS

President

CHAS. C. THACH

Commandant and Professor of Military Science and Tactics
CAPTAIN ISAAC SPALDING, F. A.

Assistant Professor of Military Science and Tactics
CAPTAIN WILLIAM MICHENER, C. E.

Supply Officer and Assistant Professor of Military Science and Tactics
CAPTAIN HARRY E. FISCHER, Inf.

Assistant Professor of Military Science and Tactics
FIRST LIEUTENANT LOUIS J. FORTIER, Bachelor of Engineering, F. A.

Instructor of Engineers
MASTER ENGINEER, SENIOR GRADE, CHARLES W. SMITH

Instructor of Field Artillery
FIRST SERGEANT GEORGE MOXHAM

Instructor of Infantry
FIRST SERGEANT LOUIS SHEELY
FIRST SERGEANT EUGENE D. CALHOUN

Instructor of Engineers
SERGEANT FIRST CLASS TEDDY LANGLAIS

Surgeon
DOCTOR J. H. DRAKE

Assistant Instructors

Lieutenant Robert M. Beasley.
Lieutenant Thomas L. Bradley.
Lieutenant William H. Davis.
Lieutenant Stuart H. Dent.
Lieutenant Walter B. Erickson.
Lieutenant Charles N. Johnston.
Lieutenant George B. Komp.
Lieutenant Jack M. Linx.
Lieutenant James F. Maury.
Lieutenant John Oliver.

Lieutenant Claude Sizemore.
 Lieutenant Alex O. Taylor.
 Lieutenant Joe Thomas.
 Lieutenant Selman L. Threadgill.
 Lieutenant Carl E. Wideberg.
 Lieutenant John E. Wideberg.

Infantry Regimental Staff

Cadet Colonel John B. DeRamus.
 Cadet Lieutenant Colonel William J. Samford.
 Cadet Captain Richard M. Johnston, Adjutant.
 Cadet Captain Charles M. Gray, Supply Officer.
 Cadet Captain Amos B. Miller, Personnel Adjutant.
 Cadet Captain Frank S. Morgan, Inspector Small Arms Practice.
 Cadet First Lieutenant R. A. Chambers, Captain, Rifle Team.

Infantry Non-Commissioned Staff

Cadet G. L. Clark, Regimental Sergeant Major.
 Cadet W. W. French, Regimental Supply Sergeant.
 Cadet H. S. Leach, Color Sergeant.
 Cadet L. L. English, Color Sergeant.

INFANTRY UNIT

First Battalion

Cadet Major John T. Frazer.
 Cadet First Lieutenant Raymond A. Chambers, Adjutant.
 Cadet Sergeant Major John M. Howarth.

Cadet Captains

Company A
 F. A. Stubbs

Company B
 J. D. Samford

Company C
 A. S. Martin

Cadet First Lieutenants

G. L. Foster
 C. W. Edwards

V. C. Hanna
 O. G. Crow

C. E. Floyd
 C. L. Young

Cadet Second Lieutenants

J. H. Allen
 R. B. Deason

J. R. Gardner
 G. W. Pearson

J. B. Townsend
 J. P. Hall

Cadet First Sergeants

J. M. Brown

W. A. Finger

H. B. Barks

Cadet Sergeants

B. N. Bryan
 H. G. Bartee
 H. L. Biggin
 B. Bullard

F. E. Bell
 W. C. Eppes
 J. P. Creel

J. C. Hare
 F. I. Jeffery
 P. H. Hardie
 R. C. Hillman

Cadet Corporals

J. K. Bullock
 M. G. Bonner
 L. M. Moore
 L. S. Furr
 C. F. Floyd
 H. W. Henderson
 R. L. Field

A. P. DeShazo
 R. H. Copeland
 J. F. Cooper
 R. C. Christopher
 D. M. Dowdell
 F. M. Barnett

H. O. Holstun
 L. G. Ford
 C. I. Harkins
 K. I. Hare

*Alabama Polytechnic Institute**Second Battalion*

Cadet Major L. C. LeBron

Cadet First Lieutenant R. L. Martin, Adjutant

Cadet Fontaine A. Maddox, Sergeant Major

*Cadet Captains*Company D
M. T. CrymesCompany E
A. M. WoodallCompany F
J. B. Pilcher*Cadet First Lieutenants*H. A. Caldwell
S. G. HarperM. W. Kyser
W. S. OwsleyR. C. Gaines
L. R. Wright*Cadet Second Lieutenants*A. V. Meigs
A. O. RiserG. S. Cooper
W. CrainO. A. Nelson
R. L. Salter*Cadet First Sergeants*

A. H. Lisenby

E. B. Seale

J. L. Hamilton

*Cadet Sergeants*J. W. McFall
L. P. OliverF. P. Page
S. Rowan
R. E. Rutledge
W. G. SimpsonJ. L. Whatley
E. A. Wilkinson
E. R. Watts
J. D. Wade
E. A. Terry
W. A. Stevenson*Cadet Corporals*C. L. Matthews
L. E. McMillan
W. G. Reese
H. P. SpannC. H. Snuggs
E. E. Adams
E. G. Caldwell
M. W. Ray
L. E. WrightW. H. Winton
R. L. Sutton
G. E. Walter
J. D. Waugh
R. L. Thomas

FIELD ARTILLERY UNIT

Cadet Major J. C. O'Neal.

Cadet Captain Joe Sanders, Adjutant.

Cadet Second Lieutenant E. F. Darby, Orienting Officer.

Cadet Second Lieutenant J. W. Shealy, Radio Officer.

Cadet Second Lieutenant R. M. Wood, Telephone Officer.

Cadet Second Lieutenant E. W. Sartain, Liaison Officer.

Non-Commissioned Staff

Cadet J. B. Rogers, Battalion Sergeant Major.

Cadet N. G. Camp, Color Sergeant.

Cadet J. Gottlieb, Radio Sergeant.

Cadet J. D. Schaub, Telephone Sergeant.

Cadet R. W. House, Scout Sergeant.

Cadet Captains

Battery A
H. S. Fullwood

Battery B
C. R. Reed

Battery C
H. L. Hahn

Cadet First Lieutenants

H. R. Barker
W. H. Stoves

O. W. Neel
L. W. Crane

M. N. Walker
J. Vernon

Cadet Second Lieutenants

W. L. Barker
J. A. Holland

C. A. Smith
L. L. Peterson

Cadet First Sergeants

J. W. Matthews

G. L. Letcher

J. C. Golightly

Cadet Sergeants

J. F. Arnall

L. J. Hillman

S. A. Spencer
J. T. Watt
N. W. Mandy

ENGINEER UNIT

Cadet Captain J. M. Boyd.

Cadet First Lieutenant F. W. Calhoun.

Cadet Second Lieutenant J. P. Trotter.

Cadet First Sergeant O. R. Head.

Cadet Sergeants

A. D. Boyd
I. B. Gunter

L. J. Gunter
E. W. Harvey

G. R. Wood

Cadet Corporals

J. M. Acker
J. D. Feagin
R. M. Ollinger

C. G. Davis
W. E. Keenon
J. O. Jackson

J. F. Holt
A. R. Harvey

THE CADET BAND.

A. L. THOMAS, Faculty Manager. P. R. BIDEZ, Bandmaster.

J. M. LINX, Instructor.

A. M. Dowling, Captain.

J. R. Moon, Lieutenant.

J. D. Foster, Lieutenant.

U. V. Whipple, 1st Sergeant.

W. B. Erickson, Sgt. and Drum Major.

E. Vandegrift, Sergeant.

Musicians.

W. T. Abbott	-----	Trombone	W. C. Middleton	-----	Drum
J. C. Bailey	-----	Clarinet	C. C. Morris	-----	Alto
W. S. Belcher	-----	Clarinet	J. H. McKinley	-----	Clarinet
T. R. Bethune	-----	Cornet	J. R. Moon	-----	Drums
H. J. Bickerstaff	-----	Clarinet	M. H. Nesbitt	-----	Saxophone
L. M. Chambliss	-----	Saxophone	J. C. O'Neal	-----	Drum
F. L. Crocker	-----	Saxophone	G. D. Pollock	-----	Cornet
A. M. Dowling	-----	Euphonium	J. N. Richardson	-----	Saxophone
J. D. Foster	-----	Saxophone	W. L. Riley	-----	Saxophone
J. E. Foster	-----	Trombone	G. R. Smith	-----	Clarinet
W. W. Foster	-----	Cornet	A. H. Speigner	-----	Trombone
R. L. Glenn	-----	Drums	H. L. Spriggs	-----	Drum
G. E. Haslam	-----	Cornet	M. D. Taylor	-----	Alto
J. D. Haynie	-----	Clarinet	T. B. Threatt	-----	Trombone
L. P. Hodges	-----	Tuba	J. F. Tribble	-----	Clarinet
W. T. Howell	-----	Cornet	E. Vandegrift	-----	Cymbals
G. R. Hurd	-----	Tuba	B. L. Ward	-----	Clarinet
J. H. Jackson	-----	Cornet	F. D. Warren	-----	Saxophone
M. E. Laseter	-----	French horn	G. B. Warren	-----	Saxophone
J. M. Linx	-----	Piccolo and Flute	U. V. Whipple	-----	Alto

GRADUATES

CLASS OF 1919.

HONORS.

Members of the Senior Class who attain distinction with a grade of 95 per cent, are graduates with Highest Honor. Those who attain a distinction with a grade of 90 per cent, and less than 95, are Graduates with Honor. Those who attain less than 90 per cent, and more than 60 per cent, are Graduates.

DEGREES.

BACHELOR OF SCIENCE.

GRADUATES.

Charles Harris Adams	Dale
Robert Stanton Allen	Jackson
Richard Courtlandt Bradford	Cherokee
Marion Earle Bryant	Baldwin
Jesse Samuel Burbage	Jefferson
Andrew Alonzo Burke	Lee
Europe Alexander Caldwell	Jackson
Homer Carder	Jefferson
Colon Eric Carlovitz	Mississippi
Benjamin Jacobs Coplan	Jefferson
Frederick Harder Cutts	Georgia
Lewis Schuessler Dowdell	Chambers
George Webster Duncan, Jr.	Lee
Philip Frederick	Georgia
Edwin Wills Freeman	Florida
James Michael Fullan	Lee
Euel Howard Gentry	Bibb
Glenn Hightower Grisham	Limestone
Walter Elbert Harrell	Lowndes
William Louis Holmes	Houston
John Edward Howell	Dale
E. C. Johnson	Georgia
Archie Monroe Kearley	Monroe
Raymond Boone Kelley	Jefferson
Henry Thomas Killingsworth, Jr.	Georgia
William Lithgow Liddell	Wilcox
William Mem Little	Georgia
Forrest Whitlock McMeans	Jefferson
Merlin Angelo Martin	Mobile
George Augustus Mattison, Jr.	Clay
William Henry Philpot, Jr.	Macon
Elisha Frederick Pollard	Crenshaw
Jefferson William Pruett	Coosa
Silas Clifford Rutland	Georgia
Albert Sidney Scott	Walker
Leroy LaFayette Self	Blount
Alma Smith	Lee
Angus Atkinson Smith	Geneva
Henry Clay Snellgrove	Marshall

Norman Dantzler Spann	Houston
Cohen Elbert Stapp	Pickens
William Henry Tucker	Chambers
Felix Augustus Walker	Russell
John Bonard Wilson	Lee
George Herbert Wright	Lee

GRADUATES WITH HONOR.

Adrian Fuller Alsobrook	Chambers
James Hugh Little Anderson	Calhoun
Daniel Garland Barnes	Dale
Helen Louise Blasingame	Lee
William Cook, Jr.	Walker
Eugene Benson Crawford	Macon
William Correll Edwards	Chilton
Edmond Peter Garrett, Jr.	Limestone
Joseph McCormick Gondran	Louisiana
Andrew Byron Hall	DeKalb
Howell Payne Hines	DeKalb
Arthur LaFayette Jones	Calhoun
Willard Mitford Mobley	Jefferson
Solomon Joseph Nadler	Etowah
Earl Cochran Nichols	Clarke
Philip William Pelts	Mississippi
Carpers Jones Perryman	Jefferson
Charles Scudder Peter	Shelby
Wilbur Arnold Pipkin	Florida
Lansing Taylor Smith, Jr.	Calhoun
William Richmond Stephens	Lee
Barckley Augustus Storey	Talladega
John Patrick Sullivan	South Carolina
Emmett Edwin Terry	Madison
John Thomas	Marengo
James Wallace Tidmore	Hale
Lionel Earl Tisdale	Florida
Lewis Candler Vaughn	Georgia
George Alfonso Wright	Lee

GRADUATE WITH HIGHEST HONOR.

Thomas Browning Chambers	Limestone
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GRADUATES IN PHARMACY (PH. G.)

Conway John Justice	Autauga
George Mark Wood	Montgomery

DOCTOR OF VETERINARY MEDICINE (D.V.M.)

John Howard Beckham	Hale
George Barney Bradshaw	Mississippi
William Posey Claughton	Chilton
William Lipscomb Douglass	Marengo
Robert Harper Hamner	Pickens
Everett Lee Harper	Pickens
McKenzie Heath	Coffee
Walter Hudson Hines	Monroe
John Bryant Jordan	Pickens
Dorrance D. Major	Mississippi
James Daniel Ratchford	Chambers
Raymond Renouf Sally	South Carolina
Robert O'Neal Suddath	Georgia

POST GRADUATE DEGREES.

MASTER OF SCIENCE.

Robert William Allen	-----	Jefferson
Cleveland Gilespe Sharpe	-----	Morgan
Esther Thompson	-----	Randolph

PROFESSIONAL DEGREES IN COURSE.

MECHANICAL ENGINEER.

Yndalecio Andres Elizondo	-----	Mexico
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ELECTRICAL ENGINEER.

William John Howard	-----	Montgomery
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DEGREE FOR PROFESSIONAL WORK.

Sherman Guy Forbes	-----	India
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DISTINGUISHED STUDENTS

Students who receive a grade of above 90 per cent, and less than 95 in the prescribed number of subjects are distinguished for excellence in scholarship, and are awarded Certificates of Distinction. Those who receive a grade above 95 per cent, are awarded Certificates of Highest Distinction.

FRESHMAN CLASS.

DISTINCTION.

Samuel Henderson Adams	Houston
Julian Clarke Bailey	Marengo
Homer Gray Bartee	Georgia
John Harold Bowen	Chambers
Frederick Wallace Breedlove	Louisiana
David Brown	Jefferson
Robert Lee Hughes Burgess	Cleburne
Nahum Allen Cannon	Jefferson
Curtis Preston Cook	Choctaw
Richard Orrick Davis	Morgan
Jackson Miller Dickinson	Autauga
Thomas Duboise	Franklin
Harold Cobb Floyd	Georgia
Harmon Austin Gardner	Lee
Peter Joseph Garland	Autauga
Jacob Gottlieb	Jefferson
Newton Gray Hardie	Jefferson
John Koga Hodnette	Macon
James Fannin Holt	Montgomery
William Jackson Lasseter, Jr.	Jefferson
James Driskell Lawrence	Cherokee
William Anthony Levie	Coosa
John Henry McKinley	Marengo
William Notley Maddox	St. Clair
Bryan Bell Marsh	Choctaw
Stevenson Douglas Mobley	Georgia
Byrd Lee Moore, Jr.	Dallas
Sherman Louis Muths	Mobile
Thomas Neely	Marengo
Milton Henry Nesbitt	Jefferson
Roy Chesler Sampley	Georgia
Hester Moore Smith	Jefferson
Hugh Griffith Spurlock	Barbour
Dewey Stewart	Morgan
Benjamin Boulware Stokes, Jr.	Jefferson
Merit Dunklin Street	Calhoun
Edward Allison Terry	Elmore
James Woodruff Thornton	Geneva
Allan Jackson Wade	Jefferson
Obadiah Dumas Williams	Monroe
William Francis Williams	Monroe

HIGHEST DISTINCTION.

Henry Clay Jones, Jr.	Montgomery
Herman Orr	Houston
Bernard Lewis Pake	Montgomery
Eugene Jules Stern	Montgomery

SOPHOMORE CLASS.

DISTINCTION.

Wyss Leo Barker	Lee
Almarion Devalco Bell	Talladega
Harold Lyle Biggin	Lee
Alfred DeWitte Boyd	Lee
Charles Henry Bradley	Mobile
John Morgan Brown	Lee
Bert Nathan Bryan	Georgia
Leigh Mallett Clark	Crenshaw
Rodney Copeland	Lee
Lawrence Welch Crane	Jefferson
David Merrick Dowdell, Jr.	Florida
Madie Dowdell	Lee
Clyde Dunn	Lamar
Grover Jackson Hornsby	Elmore
John Witty Lovin	Morgan
Norman Wilfred Mandy	Jefferson
Robert Lee Martin	Jefferson
Frank Sidney McFaden	Montgomery
Cyrus Eugene Reid	Montgome
Glenn Ernest Riddell	Tennessee
Edward Auberts Roberts	Mobile
John Vernon	Jefferson
James Dallas Wade, Jr.	Montgomery
Marion Newman Walker	South Carolina
Luther Boardman Watson, Jr.	Wilcox
Edgar Reid Watts	Walker
Edward Everett Wilkinson	Clarke
Vester Vanderbilt Williams	Marion
Allen Killebrew Wood	Jefferson

HIGHEST DISTINCTION.

Jacob Murphree Boyd	Pike
Edward Fletcher Darby	Jefferson
Philip Henry Hardie	Jefferson
James Wellington Shealy	Coffee

JUNIOR CLASS.

DISTINCTION.

Robert Marion Beasley	Lee
Raymond Austin Chambers	Limestone
Warren Crain	Wilcox
Edward Pilate Culpepper	Henry
Charles Wesley Edwards	Coffee
Lester Lamar English	Jefferson
Charles Ewell Floyd	Lee
James Douglas Foster	Lee
Charles Merrill Gray	Walker
Orville Butler Hodges	Madison
Milton Oliver Howle	Jefferson
Hanson Stakely Keller	Jefferson
Amos Bender Miller	Cullman
James Byrd Pilcher	Houston

Claude Sizemore	Fayette
Dana Gibson Sturkie	Lee
Joseph Pierce Trotter	Baldwin
Roy Hope Turner	Tallapoosa
Carl Eric Wideberg, Jr.	New Jersey
George Raymond Wood	Baldwin

SPECIAL STUDENTS.

DISTINCTION.

William Jefferson Christian	Jefferson
Claud Hawkins Funderburg	Jefferson
Victor Caryl McIlvaine	Florida
Frederick Davis Patterson, Jr.	Georgia
Jessie Seibold	Marshall

CATALOGUE OF STUDENTS

SESSION 1919-1920.

GRADUATE STUDENTS.

Madison LeRoy Bonner	Clay
Colin Eric Carlovitz	Mississippi
Thomas Browning Chambers	Limestone
Solidelle Renshaw Fortier	Louisiana
Elisha Frederick Pollard	Crenshaw
Gautier Conde Yancey	Macon

SENIOR CLASS.

James Harvey Allen	Calhoun
Robert Marion Beasley	Lee
Charles Marion Bedingfield	Lauderdale
Mafus Bird	Marengo
Thomas Herbert Bonner	Clay
Thomas Guy Bowlan	South Carolina
Jacob Murphree Boyd	Pike
Thomas Lyons Bradley	Jefferson
Warren Calvin Brice	North Carolina
Omar Wesley Bridges	Macon
Lyle Brown	Choctaw
Joseph Chandler Burton	Shelby
Hamlin Alexander Caldwell	Jackson
Fred William Calhoun	Jefferson
William Alfred Cammack	Clarke
Giles Homer Carlovitz	Mississippi
Raymond Austin Chambers	Limestone
George Little Clark	Marengo
George Samuel Cooper	Lee
Warren Crain	Wilcox
Osler Gilbert Crow	St. Clair
Marvin Trowbridge Crymes	South Carolina
Edwin Pilate Culpepper	Henry
Richard Buey Deason	Jefferson
Stuart Hubert Dent	Barbour
John Bealie Deramus	Chilton
Angus Mancill Dowling	Barbour
Charles Wesley Edwards	Coffee
Lester Lamar English	Jefferson
Lecil Verland Evans	Lamar
Gordon Farned	Franklin
Charles Ewell Floyd	Lee
George Lunsford Foster	Lee
James Douglas Foster, Jr.	Lee
John Thomas Frazer	Chambers
William Williams French, Jr.	Jefferson
Benjamin Bradley Fuqua	Lauderdale
William Asker Fuqua	Barbour
Robert Calloway Gaines	Clay
Junius Roach Gardner, Jr.	Jefferson
Samuel Gideon Garner	Tuscaloosa
Henry Stanley Genius	Louisiana
Charles Merrill Gray	Walker
Alfred Flournoy Griggs	Jefferson
Paul Stanley Grimes	Georgia

Isham Belle Gunter	Lee
Lindsey Jesse Gunter	Lee
Jesse Pankey Hall	Etowah
William Robert Hall	Jefferson
William Stephenson Halsey	Colbert
Verner Cyril Hanna	Lee
Sidney Guenveur Harper	Montgomery
Ernest Wescott Harvey	Montgomery
George Boltz Hawthorne	Wilcox
Arthur Lee Hayley, Jr.	Walker
Oliver Ripley Head	Shelby
William Caesar Hearn	Macon
John Monroe Howarth	Chambers
Milton Oliver Howle	Jefferson
Clint Jacobs	Coosa
Jerry Leslie Jimmerson	Lee
Neal Corbly Johnson	Colbert
Reuben Lee Johnson	Tallapoosa
Richard Malcolm Johnston	Jefferson
Hanson Stakely Keller	Jefferson
John Simmons Kernachan	Lauderdale
William Duke Kimbrough	Kentucky
George Barnes Komp, Jr.	Mississippi
Melton Winship Kyser	Jefferson
Edwin Bragg Lancaster	Sumter
Arthur Armon Lauderdale	Marion
Howard Stuart Leach	Montgomery
Lamar Cantelou LeBron	Elmore
Frank Underwood Leonard	Jefferson
Walter Littleton McArthur	Geneva
Jesse Newman McLane	Florida
Fontaine Alexander Maddox	St. Clair
Alfred Shelby Martin	Jefferson
Robert Lee Martin	Jefferson
James Franklin Maury, Jr.	Mobile
Archie Vernon Meigs	Tallapoosa
Amos Bender Miller	Cullman
Jacob Robert Moon	Coosa
Frank Stewart Morgan	Dallas
John Herbert Murray	Lee
William Albert Neal, Jr.	Cleburne
Oscar Albin Nelson	Jefferson
James McCarty Oliver	Jefferson
John Oliver, Jr.	Pickens
Winfield Scott Owsley	Elmore
Gerald Walstein Pearson	Georgia
Marion Lucian Perdue	Coffee
Sidney Clark Phillips	Mobile
James Byrd Pilcher	Houston
Staton G. Possien	Lee
Glenn Ernest Riddell	Tennessee
Hugh Balsham Rigby	Georgia
Adam Olin Riser, Jr.	Jefferson
Rufus Arnold Roberts	Randolph
Robert Clyde Rogers	Escambia
Roy Lester Salter	Jefferson
James Drake Samford	Montgomery
William James Samford	Lee
Arthur Shaver	Cullman

Edwin Huson Sims, Jr.	Georgia
Claude Sizemore	Fayette
Ernest Gustave Small	Dallas
William Lee Smith	Jefferson
William Elbert Snuggs	Randolph
Charles Paddock Storrs	Elmore
Francis Seaborne Stubbs	Georgia
Dana Gibson Sturkie	Lee
Jack Tamblyn	Jefferson
Edgar Cecil Taylor	Crenshaw
Joe Thomas	Tallapoosa
Edward Hofford Todd	Jefferson
James Bennett Townsend	South Carolina
John Herman Trapp	Mississippi
Joseph Pierce Trotter	Baldwin
Roy Hope Turner	Tallapoosa
Erskine Eugene Vandegrift	St. Clair
Harold Walker	Jefferson
Chester Clyde Warren	St. Clair
Lynn Casey Watson	Jefferson
Walter Alexander Whatley	Lee
Carl Eric Wideberg, Jr.	New Jersey
Gilmore Clark Williams	Cullman
Allen Davidson Williamson	North Carolina
Allen Killebrew Wood	Jefferson
George Raymond Wood	Baldwin
Aaron Montgomery Woodall	St. Clair
Leonard Rudolph Wright	Georgia
Calvin Locke Young	Texas

JUNIOR CLASS.

Joe Morris Acker	Etowah
Marcus Ralph Barker	Lee
Wyss Leo Barker	Lee
Herbert Bernard Barks	Jefferson
Samuel Thomas Barnes, Jr.	Mobile
Frank Madison Barnett	Bullock
Almarion Devalco Bell	Talladega
Franklin Evelyn Bell	Florida
Edwin Stratford Bennett	Montgomery
Reuben Marshall Bentley	Crenshaw
Harold Lyle Biggin	Lee
Daniel Eugene Bivins, Jr.	Florida
Alfred DeWitte Boyd	Lee
Charles Henry Bradley	Mobile
John Morgan Brown	Lee
Robert Crawford Brown	Jefferson
Bert Nathan Bryan	Georgia
James Lake Buchanan	Colbert
Bartow Bullard	Coffee
John Kavanaugh Bullock	Montgomery
Henry Bernard Burke	Florida
Benjamin Zachariah Burleson	Marion
William Fitzbugh Byrd	Jefferson
Norman Glenn Camp	Georgia
Noah Winston Caton	Covington
Charles Jefferson Christian	Shelby
Ralph Coleman Christopher	Choctaw
John Francis Cooper, Jr.	Tuscaloosa
Rodney Hugh Copeland	Lee

Lawrence Welch Crane	Jefferson
John Paul Creel	Jefferson
Francis Lauren Crocker	Walker
Roland Anderson Crump, Jr.	Montgomery
Edward Fletcher Darby	Jefferson
Clifford Gilmore Davis	Texas
Clyde Odeska Davis	Tallapoosa
Albert Perry DeShazo	Jefferson
Frank Perry Dobson	Talladega
David Merrick Dowdell, Jr.	Florida
Madie Dowdell	Lee
Clyde Dunn	Lamar
Everett Champie Easter	Limestone
Marguerite Anna Eberhardt	Dallas
William Cornelius Eppes, Jr.	Marengo
Joel Daniel Feagin	Bullock
Wayne Arnold Finger	Mississippi
Melville Gray Fuller	Madison
George Madison Haas	Mobile
Herbert Louis Hahn	Jefferson
Lewis Wilson Handley	Clay
Phillip Henry Hardie	Jefferson
Joseph Crosland Hare	Lee
William Wesley Hatcher	Lee
George Morton Hawk	Marengo
Lyle Jorman Hillman	Dallas
Robert Charles Hillman	Dallas
Eugene Henry Hinton	Georgia
Linnie Pitt Hodges	Houston
Warren Speigner Hoffman	Lee
Joseph Alfred Holland, Jr.	Madison
Albert Lee Holloway	Monroe
Harvey Holstun	Lee
Hollis Oswald Holstun	Tallapoosa
Mather Daniel Hood	Etowah
Ray Walshall House	St. Clair
Curtis Samuel Howard	Bullock
Jesse Wilfred Howe	Madison
Cecil Daniel Hughes	Calhoun
James Daniel Hurlbert	Sumter
Mose Jacobs	Jefferson
Frank Inge Jeffrey	Wilcox
Sidney Walton Johnson, Jr.	Lee
Charles Nathan Johnston	Marengo
Eugene Rhodes Johnston	Jefferson
George Edward Johnston, Jr.	Washington
Edgar B. Keenon, Jr.	Jefferson
Thomas Ford Kendrick	Dallas
George Glenn Lamar	Lee
Coquit Hill Lane	Lee
Elkan Leva	Dallas
Homer Blitch Limbaugh	Florida
Jack Marc Linx	Jefferson
Amsie Horton Lisenby	Houston
Albert Shelton Lisenby	Houston
James Otis Lisenby	Houston
John Witty Lovin	Morgan
Webb McCoy	Marengo
Frank Sidney McFaden	Montgomery

James William McFall	South Carolina
Joseph Wheeler Malone	Jefferson
Norman Wilfred Mandy	Jefferson
James Warren May	Mobile
Eugene Allen Maynor	Blount
Janssens Joseph Melancon	Louisiana
George Knox Miller	Florida
Andrew Campbell Mitchell, Jr.	Jefferson
Oliver Wendell Neel	Arkansas
Hubert Williams Nixon	Calhoun
Claude Wainwright O'Donnell	Mississippi
Lee Percy Oliver	Tallapoosa
Charles George Ollinger	Mobile
Rodney Matthies Ollinger	Mobile
James Cornelius O'Neal	Mobile
Frank Penn Page	Houston
William Palmer	Wilcox
Frederick Davis Patterson, Jr.	Georgia
Lyman Loomis Peterson	Coosa
Elwyn Nimmons Powell	Georgia
Clyde Augustus Pruitt	Wilcox
James Bennett Randall	Baldwin
Grover Washington Ray	Tallapoosa
Robert Presly Rebman	Lawrence
Russell Sage Reed	Etowah
Cyrus Eugene Reid	Montgomery
William Leonard Riley	Jefferson
John Benjamin Rogers	Jefferson
Robert Edgar Rutledge	Jefferson
Edgar Franklin Sanborn	Georgia
Joseph Sanders	Houston
Ezra Wilson Sartain	Walker
Julius Douglas Schaub, Jr.	Barbour
Charles Scott	Jefferson
Eunice Brooks Seale	Hale
James Wellington Shealy	Coffee
William Gurley Simpson, Jr.	Wilcox
Emmett Sizemore	Fayette
Charles Alstin Smith	Talladega
Robert McClure Smith	South Carolina
Ralph Madison Snider	Jefferson
Alex Hillary Speigner	Houston
Leroy Page Spoon	North Carolina
William Philip Spratling	Lee
William Allen Stevenson	Macon
Andrew McAdams Stovall, Jr.	Walker
John Braden Suggs	Talladega
Edward Allison Terry	Elmore
Napoleon Bonaparte Tyler	North Carolina
John Vernon	Jefferson
James Dallas Wade, Jr.	Montgomery
Ross Franklin Wadkins	Lee
Marion Newman Walker	South Carolina
George Elmer Waller	Lee
Preer Walton	Georgia
Birma Leon Ward	Houston
George Butler Warren	Morgan
Luther Boardman Watson, Jr.	Wilcox
Joseph Tee Watt, Jr.	Lee

Edgar Reid Watts	Walker
John Dayton Waugh	Montgomery
John Louis Whatley	Lee
Ulysses Virgil Whipple, Jr.	Georgia
John Eric Wideberg	New Jersey
Ernest Albert Wilkerson	Autauga
Edward Everett Wilkerson	Marengo
Vester Vanderbilt Williams	Marion
Arthur Herbert Williamson	Lowndes
Samuel Lee Wilson	Winston
William Herman Winton	Butler
Ralph Mason Wood	Dallas

SOPHOMORE CLASS.

William Thomas Abbott	Jefferson
Samuel Henderson Adams	Houston
James Abner Allen, Jr.	Lee
Thomas Walton Allen, Jr.	Choctaw
Charles C. Anderson	Walker
Samuel Porter Anderson	Colbert
Richard Carroll Andrews	Chambers
Wesley Howard Appleton	DeKalb
Herbert Lamar Avery	Chambers
Julian Clarke Bailey	Marengo
Charles Hammond Baker, Jr.	Florida
John Coleman Banks	Greene
Vida Barker	Lee
Edgar James Barnett	Houston
Homer Gray Barte	Georgia
Lucien Kellogg Basore	Jefferson
Francis Mitchell Beaird	Dallas
Elliott Laney Beasley	Florida
Aubrey Graham Bennett	Macon
James Crow Blalock	Lauderdale
James Cameron Blanton, Jr.	Georgia
Moffatt Grier Bonner	Wilcox
Julian Ivandale Boriss	Jefferson
John Harold Bowen	Chambers
Samuel Marks Boykin	Mobile
John Robert Bradley, Jr.	Florida
James Thomas Bradley, Jr.	Baldwin
John Buel Braswell	Bullock
Frederick Wallace Breedlove	Louisiana
Barney Bivins Brown	Lauderdale
David Brown	Jefferson
Harry Leroy Brunson	Elmore
Robert Lee Hughes Burgess	Cleburne
Nahum Allen Cannon	Jefferson
William Caldwell Chambers	Limestone
Edward Montgomery Chandler	Jefferson
Obie Werle Clarke	Crenshaw
Marion Clifton Cobb	Sumter
Thomas Wilkes Coleman, Jr.	Calhoun
Albert Hamilton Collins	Fayette
James Evans Combs	Chambers
Ray Oliver Conwell	Jefferson
Curtis Preston Cook	Choctaw
Samuel Clarence Cook	Wilcox
Horace Cecil Cooper	Florida
Nelson Drennan Cooper	Florida

Robert James Cooper	Lee
Joseph William Cullars	Lee
Edwin Davis Cumming	Lauderdale
Ennis Augustus Davis	Georgia
Emmette Melvin Davis	Jefferson
Edmond Pearce Davis	Mobile
Richard Orrick Davis	Morgan
Herman Hoover Deck	Marshall
William Edwin DelHomme	Mobile
Jackson Miller Dickinson	Autauga
Rosa Drake	Lee
Ralph Brown Draughon	Geneva
Thomas Duboise	Franklin
Wilton Burton Duncan	Lee
William Joseph Dunn	Conecuh
Archibald Bullock Dunwoody	Georgia
Walter George Dupree	Tallapoosa
Harvey Arnold Edge	Chambers
William Raymond Edwards	Elmore
James Kyle Elliott	Lee
Walter Benedict Erickson	Mobile
Edward Everett	Mississippi
Ernest Rossier Farrell, Jr.	Wilcox
Robert Lee Field	Calhoun
Cyril Frank Floyd	Lee
Claude Hawkins Funderburg	Jefferson
Louis McLean Funderburg	Jefferson
Angelo Otto Festorazzi	Mobile
Peter Joseph Garland	Autauga
Harmon Austin Gardner	Lee
Robert Lee Glenn	Jefferson
Vernon Joseph Glover	Jefferson
Frank Gordon	Marion
Jacob Gottlieb	Jefferson
Hendricks A. Grantham	Conecuh
Virgil Roy Greene	Winston
Richard Lester Haggard	Etowah
Charles Kenneth Hail	Baldwin
Julian Orison Hall	Houston
Newton Gary Hardie	Jefferson
John Gilbert Harlan	Tallapoosa
James Alexander Harrison	Jefferson
Addison Reese Harvey, Jr.	Montgomery
Benjamin Franklin Hatchett	Limestone
Jack Duke Haynie	Lee
Harlie Bee Helms	Coffee
William Hobart Henderson	Jefferson
Robert Crane Hendley	Georgia
Harold Eugene Hendon	Macon
Joseph McJunkin Herndon	South Carolina
John Koga Hodnette	Macon
Henry Coker Holleman, Jr.	Barbour
James Fannin Holt	Montgomery
Orlando Fox Howe	Montgomery
Fred Hunt	Chambers
George Richard Hurd	Escambia
Albert Clay Jackson	Jefferson
John O'Connell Jackson	Montgomery
Fred Wesley Jenkins	Chilton

Alton Claud Jennings	Chambers
Charles Hanson Johnson	Tallapoosa
Henry Clay Jones, Jr.	Montgomery
James Centre King	Lee
James Hanlin Kinzer	Colbert
John Kenneth Kirkwood	Walker
Albert Dudley Knapp	Lee
Cam Brown Lanier	Georgia
William Jackson Lasseter, Jr.	Jefferson
James Driskell Lawrence	Dallas
Peyton Brantley Little	Georgia
John Burrow Looney	Tennessee
Arley Baden Love	Montgomery
Louis Friedman Loveman	Etowah
Charles Byrne Lynch	Montgomery
Frank Hollingsworth McCarley	Chambers
Charles B. McCartha	Elmore
Harold Judson McCaskill (Irregular)	Florida
David Lanier McDavid	Monroe
Robert Heard McGinty	Tallapoosa
Francis Pearson McKemie	Chambers
John Henry McKinley	Marengo
Lauchlin Emerson McMillan	Bullock
William Notley Maddox	St. Clair
Daniel Lewis Meade	Dallas
William Tarrt Mellen	Sumter
Walker Hamilton Mendenhall	Jefferson
Arthur Augustus Miller, Jr.	Marengo
Jesse Lokey Miller	Georgia
Stevenson Douglas Mobley	Georgia
Robert Charles Montgomery	Jefferson
Byrd Lee Moore, Jr.	Dallas
Francis Cecil Morere	Mobile
Clifton Chambers Morris	Chambers
Frank Shackelford Mosely	Montgomery
George Alwyn Muths	Mobile
Sherman Louis Muths	Mobile
Thomas Neely	Marengo
Hugh Anderson Neighbors	Coosa
Arthur P'Pool Nesbit	Morgan
Milton Henry Nesbitt	Jefferson
Leslie Newman	Lee
Rufus Percy Nicholson	DeKalb
Walter Barnes Noble	Mobile
Sidney Lawson Norwood	Jefferson
Herman Orr	Houston
Gustavus Adolphus Orum	Bullock
Bernard Lewis Pake	Montgomery
Jacob Lowe Pate	Chambers
William Vandyke Pattillo	Morgan
Lee Colquit Perry	Georgia
Henry James Phillips	Choctaw
Walter Lehman Pinner	Montgomery
Bunyan Pipkin	Florida
George Dean Pollock	Jefferson
Joseph Edward Pollock	Dallas
Roy Thomas Porter	Lawrence
Adam Pow	Jefferson
William Bryan Proctor	Jackson

Cyril Hugo Pruet	Clay
Russell Aubrey Pruet	Clay
Robert Lackey Pulley	Madison
Lamar Sidney Rainer	Montgomery
Lee Rasberth Rayfield	Coosa
Frank Alexander Reagan	Clay
Albert Milo Redd	Bullock
Arthur Charles Reed	Jefferson
George Wright Reese	Florida
Charles Frederick Reynolds	Dale
James Dee Roberson	Winston
Amos Dalton Roberts	Fayette
Dickson Wharton Robertson	Jefferson
Crawford Allen Rose	Louisiana
Charles Anderson Rowland, Jr.	Colbert
Clifton Clark Russell	Talladega
John Willard Russell	Florida
Charles Max Sabotka	Morgan
Roy Chesler Sampley	Georgia
John Sanders, Jr.	Houston
Alexander Marion Saunders	Florida
Charles Phillip Scarborough, Jr.	Chambers
Euel Augustus Screws	Lee
Joseph Alexander Scruggs	Escambia
Edward Creech Sherling	Butler
John Brett Shirey	Marion
Troy Blanch Sizemore	Fayette
Leonidas Bryan Sledge	Hale
John Cooper Slone	Morgan
Charles Linton Smith	Fayette
George Roe Smith	Marengo
Hester Moore Smith	Jefferson
James Fallin Smith	Escambia
Marion Gordon Smith	Jefferson
Robbie Smith	Lee
Virgil Alfred Smith	Geneva
Charles Hiram Snuggs	Randolph
Philip Hugh Spann	Houston
Sarah Augusta Spratling	Virginia
Hugh Griffith Spurlock	Barbour
Alexander Dewey Staples	Jefferson
Percy John Steele	St. Clair
Eugene Jules Stern	Montgomery
Dewey Stewart	Morgan
Benjamin Boulware Stokes, Jr.	Jefferson
William Mouzon Stokes, Jr.	Walker
Merit Dunklin Street	Calhoun
Harry Stringfellow	Tennessee
Robert Lee Sutton, Jr.	Dallas
Virgil Cline Tamplin	Lee
John Osman Taylor	Lee
Robert Emmett Taylor	Lee
William Woodall Terry	Madison
James Andrew Thigpen	Lee
Roy Leonard Thomas	Limestone
James Woodruff Thornton	Geneva
Samuel Brightman Till	Lowndes
Francis Bartow Trammell	Chambers
Zachary Taylor Trawick	Lee

Jesse Thomas Traywick, Jr.	Montgomery
John Furman Tribble	Walker
Morton Victor Turner	Georgia
George Thomas Turnipseed	Bullock
James Winchester Vaiden	Perry
Edgar Daniel Vaughan	Lee
Allan Jackson Wade	Jefferson
Otis Eugene Waller	Lee
Harry Wilfred Watkins	Jefferson
George Washington Ward	Wilcox
Edward Beall Weedon, Jr.	Barbour
Arthur Luna Welden	Elmore
David Deaderick Wendel	Tennessee
Edward Cheek White	Autauga
James Walter White	Hale
Homer Eaton Williams	Lauderdale
Obadiah Dumas Williams	Covington
William Francis Williams	Covington
Henry Clay Willingham	Lauderdale
Earle Frederick Wilson	Escambia
Warfield Richardson Wood	Jefferson
Robert Watkins Youngblood	Houston
Charles Hodges Zuber	Lee

FRESHMAN CLASS.

William Abt	Cullman
Theodore Roosevelt Adkins	Georgia
Jesse McDaniel Albritton	Wilcox
James Thomas Albritton	Geneva
Hammond Lamont Alexander	Coffee
Joseph Dill Allison	Dallas
William Hugh Allen	Georgia
Frank Hayne Alley	Georgia
Robert Archer Anderson	Tennessee
James Leslie Andrews	South Carolina
John Fleming Arnall	Georgia
James Wiley Arnall	Georgia
James John Baird	Jefferson
Metullus Ard Barnes	Dale
Reid Boyleston Barnes, Jr.	Lee
James Coyles Barry, Jr.	Mobile
George Herman Bates	Limestone
Josiah Kilgore Bates	South Carolina
Elmer Weaver Bartlett	Clay
Alice Beasley	Lee
William Stansel Belcher	Florida
John Paul Belyeu	Tallapoosa
Sherwood Randolph Bennett	Lee
Earl Atwood Benson	Mobile
John William Berry	Franklin
Thomas Reese Bethune	Georgia
James Frank Bevis	Randolph
Hugh Jennings Bickerstaff	Georgia
Lindley Neill Bickerstaff	Russell
Martin Rogers Biggers	Mississippi
Lucius Blackmon	Pike
Marshall J. Blackmon	Russell
William Robert Blair	Jefferson
Oliver Boaz	Talladega

Andrew Love Boyd	Pike
Ralph Franklin Boyd	Sumter
Rufus Foy Brackin	Henry
Clayton Sanford Branscombe	Bullock
Whidden Patrick Breen	Jefferson
James Ernest Bridges	Macon
Posey Purser Brooks, Jr.	Lee
Margaret Brown	Lee
William Phillip Brown	Lee
Harold Spencer Brownell	Jefferson
Frank Conard Bryan	Florida
James Monroe Bryan	Lee
Claude N. Buchanan	Colbert
Anderson O'Rear Burton	Walker
Edward Gordon Caldwell	Elmore
Elbert Hays Caldwell	Jackson
Cory Lamar Calhoun	Clarke
Charles Louis Cannon	Jefferson
James Clifton Cannon	Autauga
John Wallis Carpenter	Talladega
William Jolley Carr	Montgomery
David Hudson Carter	Montgomery
Henderson Lester Carter	Limestone
Thomas Otto Carter	Jefferson
Lawrence C. Case	Florida
Watkins Batt Castleberry	Conecuh
Lauren Morgan Chambliss	Montgomery
Charles Stephens Chapman	Clarke
Wheeler Edward Chapman	Coffee
Frederick Julian Chesser	Covington
Clem Lyman Clardy	Talladega
Franklin Ashton Clarke	Covington
Paul Raymond Clarke	Walker
Fred Compton Coleman (Irregular course)	Dallas
Frederick Henry Colley	Jefferson
Adolph Allen Conner	Montgomery
Mildred Gladys Copeland	Lee
Joel Houston Craig	Arkansas
Homer Johnson Creel	Jefferson
Huel Lloyd Crockett	Russell
Robert Kernachan Cross	Colbert
George Lewis Crouch	Chambers
Thomas Linwood Crowder	Chambers
Frank Lewis Cumbee	Georgia
Edwin Lawrence Cunningham	Wilcox
Edmond Thomas Daniel	Georgia
Hugh Carson Daniel	Lee
Carl Davis	Jefferson
John Elliott Davis	Jefferson
Malcolm Carlo Davis	Mobile
Pleasber Newton Davis	Tallapoosa
William Hardy Davis	Jefferson
Albert Malcolm DeShazo	Jefferson
M. D. Donahoo	St. Clair
Merrick Dowdell	Mobile
Samuel Marion Dowling	Dale
Paul Lamar Draper	St. Clair
Vardaman Duckworth	Mississippi
Charles Dudley	Georgia

DeVan Harris Dumas	Mobile
Robert Tipton Dumas	Mobile
Sebastian Anthony Durban	Lauderdale
Robert Tyng Elder (Irregular course)	Dallas
Samuel James Ervin	Wilcox
Charles Chester Esdale, Jr.	Jefferson
Herbert Otto Espy	Houston
Samuel W. Esslinger	Madison
Willard Theodore Farmer	Jefferson
Adger Ellison Floyd	Barbour
Cecil Floyd	Lee
Kate Floyd	Lee
John William Ford, Jr.	Hale
Joseph Eugene Foster	Montgomery
William Ware Foster	Montgomery
John Pow Foy	Barbour
Carl Sellers Fudge	Madison
James Roy Gantt	Elmore
Louis Wright Gardner	Lee
William P. Gearreld, Jr.	Georgia
Homer Franklin Gibson	Morgan
Judson Marvin Gillespie	Marengo
Hugh Smithson Gladish	Tennessee
Rufus Brawell Godwin	Georgia
John Calhoun Golightly	Jefferson
Leon Gottlieb	Jefferson
Luther Graves	Blount
Tennent Lomax Griffin	Mobile
William Peal Grisham	Limestone
Joe Martin Guthrie	Bullock
Osie Saxon Hagerman	Lee
Jack Hale	Jefferson
Emmett William Halfman	Montgomery
Harry Halse	Montgomery
Arthur Lee Hamner	Mississippi
Lee Hamner	Winston
Alexander Barraud Hanson	Jefferson
Harriet Currie Hardeman	Lee
Harry Hilliard Hardeman	Louisiana
Curtis Iron Harkins	Talladega
Edgar Franklin Harlin	Randolph
George Leo Harris, Jr.	Montgomery
William Augustus Harvey	Montgomery
Arthur Clairborn Hayes	Lee
Dupree Hays	Mobile
John Cecil Hays	Lee
Ralph Hampton Helms	Houston
George Halsey Henderson	Colbert
Flavius Joseph Hendley	Sumter
Lawrence Edward Hereford	Madison
Robert Higginbotham	Jackson
Joseph Hugh Hill	Georgia
Jack Yarbrough Hines	Madison
Harris Gaston Hinton	Georgia
Ray Hitchcock	Bullock
Dolon Ernest Hodges	Mobile
Carl Ransom Hogle	Jefferson
Joe Andrew Holifield	Mobile
Beverly Reid Holstun	Tallapoosa

Hall Caldwell Howard	Walker
Arthur George Howell	Morgan
Rutherford Hayes Howell	Marion
William Travis Howell	Montgomery
William Hamell Hulsey	Walker
Alvin Adelbert Hungerford	Dallas
William Brewer Hughes, Jr.	Tennessee
James Madison Hunnicutt	Jefferson
James William Hurt	Perry
Erastus Winom Ingle	Blount
James Hubbert Ingle	Walker
James Forniss Irby	Mobile
Julian Harold Jackson	Florida
Henry Malcolm James	Chambers
Jack Gordon Jeffers	Randolph
Joseph Pitt Jennings	Florida
Ingram Purser Johnson	Marengo
Oren Johnson	Bullock
Thomas Bernard Johnson	Clarke
Amos Jackson Jones, Jr.	Crenshaw
Joseph Middleton Jones	Madison
Rinaldo Gray Jones	Lee
Herbert Rosenberg Kahn	Montgomery
Charles Spurgeon Keller	Cullman
William Henry Kendrick	Dallas
George Killen	New York
James Tait King	Lee
Walter Douglas Knight	Georgia
Frank Alexander Knowles	Jefferson
Ira Landrith Knox	Tennessee
Charles Adolphus LaCroix, Jr.	Jefferson
Charles Hunt Lamar	Macon
William Judson Landrum	Monroe
James Alexander Lane	Tallapoosa
Alexander Filmore Lankford	Etowah
Pierre Lee	Coffee
Robert Ernest Lee	Concuh
Clarence Preston LeSueur	Lee
Julian Lightfoot Letcher	Macon
Archie Wood Levie	Coosa
James Malcolm Lewter	Madison
John Williams Lindsley	Tennessee
Andrew Bismarck Long	Butler
Paul Jennings Longshore	Shelby
Lester Beebe Lord	Baldwin
Elmer Johnson Lovern	Georgia
Julius Caesar Lowery	Cullman
Lige Loy, Jr.	Jefferson
George Glover Lumpkin	Georgia
Frank Emory McCabe	Pennsylvania
Douglas Chamberlain McCall	Lee
Charles Eugene McCartney	DeKalb
Hill McCrary	Clay
Robert Vincent McDonald	Mobile
James Lindsley McKinnon	Talladega
Frank B. McKenzie	Marion
James Allan McLennan	Georgia
John Leon McMillan	Bullock
Herbert Glenn McNair	Dale

Clayton Floyd McWilliams	Georgia
Richard Edward McWilliams, III.	Wilcox
Robert Lee McWilliams	Limestone
Andrew Malone	Jefferson
William H. Mandy	Jefferson
Robert Burton Mardre	Lee
Fred Broughton Martin	Lowndes
Joe Ben Martin	Covington
George Milner Mason	Shelby
Hibbard Livingston Mason	Conecuh
Joseph Walsh Mathews	Mobile
Henry Dallas Melton	Houston
Oliver Reynolds Melton	Dallas
Herbert Marshall Melvin	Greene
Morris Trice Meriwether	Morgan
Walter Conyngton Middleton	Jefferson
Fletcher Edward Miller	Covington
Walter Clinton Miller	Barbour
Glenn Mills	Conecuh
Herman Eugene Monroe	Madison
Cecil Floyd Moore	Lee
Dewey Columbus Moore	Covington
Lewis Mathews Moore	Barbour
John Lewis Morgan	Jefferson
Samuel Lundy Morrow	Morgan
John Harold Murphree	Pike
Bolling King Naftel	Montgomery
Lee Albert Naftel	Montgomery
James Clyde Nail	Jefferson
Jack Finklea Nettles	Monroe
Waldrop Lavert O'Donnell	Mississippi
Lewis Moses Omer	Jefferson
James Clanton O'Neal	Covington
Robert O'Neel	Mobile
Charles Boutelle Ordway	Tennessee
Benjamin Conley O'Rear	Etowah
James Lee Orr	Chambers
Frederick Wood Osborn	Jefferson
James Robert Owen	Jefferson
Willis Lawton Owen	Clay
William Melton Owen	Lee
George Cary Page	Covington
Edward Walker Parish	Barbour
William Tarpley Parker	Clay
Leon Hayne Parks	Talladega
John William Pate	Blount
James Gibson Pearce	Marion
Thomas Jackson Peniston	Georgia
Albert Monroe Perdue	Coffee
James Leonard Peterson, Jr.	Cleburne
Theodore Henry Pfeil	Etowah
Reginald Frederick Pippin	Dale
William Melvin Pistole	Mobile
Richard Moore Pitts	Montgomery
Wilella Plant	Lee
Cary Loraine Porter	DeKalb
Paul Augustus Potts	Georgia
John Stephens Powell (Irregular Course)	Georgia
Phil Preiss	Montgomery

Thomas Willits Price	Jefferson
George Richard Purifoy	Escambia
Ernest Franklin Randall	Dallas
William Carey Ratchford (Irregular Course)	Chambers
Willis Morton Ray	Tallapoosa
Raymond Mayberry Reaves	Bibb
James Stillman Reece	Pickens
John Thompson Reed	Florida
Carl Leitner Redd	Bullock
Ira Wynn Rhodes, Jr.	Talladega
Jasper Newton Richardson	Walker
Clayton Wesley Riley	Macon
Emmett Wesley Riley	Florida
Eugene Robbins, III.	Dallas
James Rex Roberson	Winston
Andrew Jack Roberts	Randolph
Edward Eastland Robertson	Tennessee
Merritt Patrick Robinson	Montgomery
Eugene Rowan	Dallas
Winford Audry Ruffin	Elmore
Roy Otis Russell	Morgan
Joseph Henry Ryland	Monroe
Reuben Major Satterfield	Tallapoosa
Charles Richard Saunders	Florida
Zack Savage	Pickens
Jack Shehee	Russell
John Edward Sherrod	Colbert
Samuel Edward Sherrod	Colbert
Thomas Herman Sills	Wilcox
William Clenie Simmons	Mississippi
Hugh Lewis Simpson	Wilcox
William Barton Sims	Monroe
Robert Duff Sloan, Jr.	South Carolina
Howard D. Small	Dallas
Raymond Vinson Smith	Jefferson
Crofford Freeman Stallings	Georgia
Emmett Lee Stallworth, Jr.	Conecuh
Johnson Heflin Staples	Coosa
H. Alford Steindorf	Cullman
James Gordon Stephenson	Lawrence
Adlai Ross Stevenson	Macon
Albert Graham Stewart	Butler
Frank McLean Stewart	Montgomery
Kelly Howard Stough	Dale
Carl Jackson Stradford (Irregular Course)	Jefferson
John Tarry Straiton	Hale
Laten Ray Sullivan	Marshall
Harry Smith Thach	Lee
Thomas Werth Thagard	Butler
William Bertrand Thomas	Talladega
William Douglas Thomason	Mobile
David Borden Tidmore	Hale
Douglas Edward Trapp	Mississippi
Alexander David Trum	Montgomery
Arthur Hall Tucker	Clarke
Robert Anderson Tuck	Blount
Frederick Dent Turner	St. Clair
Samuel Guy Turnipseed	Bullock
William Kendrick Upchurch	Montgomery

James Fielding Vaughan	Mobile
Bryan A. Wagon	Chambers
Joe Harman Wallace, Jr.	Sumter
Henry Lorenzo Waller (Irregular Course)	Lee
John Thomas Waller	Lee
James Alva Walton (Irregular Course)	Chambers
Thomas Edwin Walton	Chambers
Thomas Robert Watson	Talladega
William Boswell Watson	Florida
Ralph Powe Webb	Jefferson
Alfred Thurber West	Jefferson
Cecil Abner Whatley	Lee
William Stephouse White	Autauga
William Parker Whitlock	Colbert
George Byron Wilkes, Jr.	Georgia
Clinton Seed Wilkinson	Dallas
Carl Edward Williams	Madison
Horace Greeley Williams	Russell
Thurman Williams	Madison
Frederick Carr Williamson	Jefferson
Raleigh Manning Willingham	Clay
Edward Harrison Wingate	Jefferson
Horace Taylor Woodall	Madison
Carl Richard Wood	Franklin
John Peavy Wright	Lee
Otis Zachry	Lee

SPECIAL STUDENTS.

Richard Frederick Bethune	North Carolina
Paul Rubin Bidez	Georgia
Philip Agnew Brady	Baldwin
William L. McKinney Bross	Coosa
John Cowan Brown	Lauderdale
Kenneth Brown	Lauderdale
Tom Henry Burton, Jr.	Calhoun
Duke Merriwell Chambers	Colbert
Samuel Donovan Croll	Pickens
Harry Sisson Fullwood, Jr.	Jefferson
Luther Hasson	Pickens
James Thomas Heflin, Jr.	Chambers
Grover Jackson Hornsby	Elmore
Marion Earl Lasater	Jackson
James Levi Lawson	Pike
William Plesent Loveless	Jefferson
Ernest Percy McDonald	Lee
Victor Caryl McIlvaine	Florida
Charles Lewis Mathews	Montgomery
Wilmer Monroe Mayson	Mobile
Daniel Grady O'Neal	Covington
James Joseph Paul	Jefferson
Archie Jesse Phillips	Calhoun
Lee Roy Roberts	Calhoun
James Paul Robinson	Choctaw
William Johnson Shelverton	Georgia
Salideon Aulus Spencer	Greene
William Henry Stoves	Jefferson
Alex Odgen Taylor	Florida
Chester Clyde Wallace	Perry
Vernon Bell Watwood	Tallapoosa

John Stanton Woodson	Walker
Eugene Lyon Wynne	Jefferson

COLLEGE OF VETERINARY MEDICINE.

SENIOR CLASS.

William Asker Fuqua	Barbour
John Herbert Murray	Lee
William Albert Neal, Jr.	Cleburne
John Oliver, Jr.	Pickens
Staton G. Possien	Lee
Rufus Arnold Roberts	Randolph
William Lee Smith	Jefferson

JUNIOR CLASS.

Reuben Marshall Bentley	Crenshaw
Benjamin Zachariah Burleson	Marion
Albert Lee Hollaway	Monroe
James Warren May	Mobile
Frederick Davis Patterson	Georgia
James Bennett Randall	Baldwin
Napoleon Bonaparte Tyler	North Carolina

SOPHOMORE CLASS.

Obie Werle Clarke	Crenshaw
Ennis Augustus Davis	Georgia
James Kyle Elliott	Lee
Edward Everett	Mississippi
James Centre King	Lee
Charles B. McCartha	Elmore
Arthur Augustus Miller, Jr.	Marengo
Jesse Lokey Miller	Georgia
Hugh Anderson Neighbors	Coosa
Frank Alexander Reagan	Clay
Clifton Clarke Russell	Talladega
Samuel Brightman Till	Lowndes
George Thomas Turnipseed	Bullock

FRESHMAN CLASS.

William Abt	Cullman
John William Berry	Franklin
James Monroe Bryan	Lee
Watkins Batt Castleberry	Conecuh
Vardaman Duckworth	Mississippi
Cecil Floyd	Lee
Curtis Iron Harkins	Talladega
Pierre Lee	Coffee
Hill McCrary	Clay
James Lee Orr	Chambers
Willis Morton Ray	Tallapoosa
William Clenie Simmons	Mississippi
Joseph Henry Ryland	Monroe
Johnson Heflin Staples	Coosa
Laten Ray Sullivan	Marshall

SPECIAL STUDENTS.

Garland Allen Bryson	Louisiana
Cristobal Cuadras, Jr.	Cuba
William James Gardner	Crenshaw
John Milton Hightower	Talladega
Wilkie Hudson Lee	Shelby
Philip Burg Waddill	Louisiana
Frank Wilson	Georgia

DEPARTMENT OF PHARMACY.

FOUR YEAR COURSE.

SENIOR CLASS.

Winfield Scott Owsley	-----	Elmore
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JUNIOR CLASS

Birma Leon Ward	-----	Houston
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TWO YEAR COURSE.

SECOND YEAR.

James Glover Andrews	-----	Chambers
Fred Armstrong	-----	Cullman
Bennett Huffman Burks	-----	Coosa
Eugene Lloyd Feagin	-----	Wilcox
William Gerard Fowler	-----	Montgomery
Reuben E. Ginn	-----	St. Clair
William Charles McCall	-----	Cuba
Samuel Wilson O'Neal	-----	Coffee
Ped Ray	-----	Covington
Jessie Seibold	-----	Marshall
Viola Seibold	-----	Marshall
Selman Lamar Threadgill	-----	Dallas

FIRST YEAR.

John Lewis Atkins	-----	Cleburne
Charles Albert Bedingfield	-----	Lauderdale
Julian Irvin Bonner	-----	Wilcox
Oliver Glenn Bruner	-----	Lowndes
Hugh Crawford Dillon	-----	Jefferson
Leeman Gardner Ford	-----	Georgia
John Kirby Foshee	-----	Crenshaw
Joseph Claude Freeman	-----	Georgia
Charles Ware Gaston	-----	Talladega
Ned Giddens	-----	Pike
Durward Earl Jones	-----	Randolph
William Hardy Lowery	-----	Jefferson
Theodore Jackson Megginson	-----	Clarke
Alexander Nolan	-----	Etowah
Phillip Harold Parker	-----	Georgia
William Woodfin Sandlin	-----	Lawrence
Purser George Segrest	-----	Macon
Hugh Sellers	-----	Houston
Wyatt Blake Shaffer	-----	Calhoun
Joe Henry Sloan	-----	South Carolina
Norris Pelham Taylor	-----	Etowah
Gary Whittington	-----	Barbour
Chauncy Depew Williams	-----	Georgia
Grady L. Wilson	-----	Pike
Louis Graham Wright	-----	Talladega

SPECIAL STUDENTS.

Ethredge Emmett Adams	-----	Morgan
Arthur Clayborne Cadenhead	-----	Lee
Karl Thomas Hare	-----	Walker
William Wayne Page	-----	Georgia

PRE-MEDICAL COURSE.

SECOND YEAR.

David Goldburg Alston	Georgia
Robert O'Keefe Atkins	Cleburne
Mark McCulloh Byrd	Lee
Julius Emory Clay	Georgia
Harry Jenkins Crawford	Georgia
William Walter Edwards	Georgia
Leonard Stephen Furr	DeKalb
Lofton Freeze Gray	St. Clair
Euclid Taylor Gullledge	Elmore
James Lonnie Hamilton	Franklin
Jesse Terryl Harper	Mobile
Gilbert Earle Haslam	Calhoun
Raymond Green Hollis	Lamar
Robert Hays Johnson	Marion
Neal Bruce Kearley	Monroe
Walter John McMurray	Georgia
Thomas Earl Martin	Dallas
Brunson Martin Sally	South Carolina
Grady Oscar Segrest	Macon
Roy Brown Sewell	Randolph
Tavner Bruce Threatt	Georgia
Thomas Lee Tidmore	Hale
Joseph Marion Watson	Florida
Nathaniel Marion Weems	Dale

FIRST YEAR.

Robert Alford Berry	Jefferson
Louis Patrick Botta	Jefferson
General Shafter Bullen	Franklin
Henry Cameron Carter	Georgia
Murray Jackson Corr	Pickens
William Brown Cowen	Jefferson
Frank Floyd	Barbour
Abner Ray Gary	Barbour
Eldridge Gay	Randolph
Roy Noland Hare	Walker
Jasper Clark Hodgins	Marshall
John Sheffield Jordan	Marshall
Arthur Francis Kimball	Mobile
Charles Morris Lacey	Jefferson
Brown Garrison Linder	Talladega
Thomas Hunter Long, Jr.	Florida
Hugh McCulloh, Jr.	Georgia
George Louie Price	Pickens
Merritt Matherson Richardson	Georgia
Joe Homer Rountree	Morgan
William Lea Stallworth	Dallas
William Hugh Tuck	Georgia
Audley L. Wakefield	Walker
Ray Monroe Warr	Barbour
William Schofield Winters	Jefferson

COURSE IN APPLIED ELECTRICITY

Ralph Sellers Beesley	Covington
William Meriwether Craven	Jefferson
Charles Mac Currie	Escambia

William Basil Ford, Jr.	Marion
William Jephtha Hogan, Jr.	Georgia
Crawford Leonidas Huckaby	Chambers
John Ingle Lacy	Mobile
James Geddes Lamb	Jefferson
James Carl Lentz	Limestone
Charles Newberry Nettles	Monroe
Edward Hendree Paine	Macon
Alexander Parris Perham	Georgia
James Wicker Robertson	Barbour
Carrol Seyman Taylor	Clay
Marion Doby Taylor	Covington
Ira Cleo Teagle	Georgia
Henry Asbury Vaughn	North Carolina

AUTO MECHANICS COURSE.

SECOND YEAR.

William Jefferson Christian	Jefferson
James David Randall	Macon

FIRST YEAR.

Paul Aguilera	Mobile
John Brodie Brown	Jefferson
Robert Glover Cosper	Shelby
Joel Hiram Glass	Pickens
Frederick Earl Gossett	Walker
Robert Grimes	Walker
Charles Henry Johnson	DeKalb
John Walter Johnson	Chilton
Edward Flack McDuffie	Etowah
Henry Burton Moses	Russell
Milford Gladstone Powell	Walker
Felix Dewey Warren	Morgan
James Paul Mason White	DeKalb

SPECIAL COURSE IN ARCHITECTURE

Joseph P. Johansen	Kentucky
Howard A. Monteith	Florida
Howard Sanford Seay	Georgia
Elda Anna Screws	Lee
Samuel Colvin Wellborn	Bullock
Chester Williamson Winn, Jr.	Jefferson

SHORT COURSE IN AGRICULTURE

Daniel Hugh Bridges	Georgia
Austin Cain	Jefferson
John Freeman Carter	Jefferson
John Alexander Dyal	Georgia
Oscar Beaucamp Farrell	Wilcox
Mitchell Pierre Foshee	Autauga
James Lavoisier Fulghum	Florida
Peter Tracy Harris	Georgia
Dewey Johnson	Pike
James Albert Moody	Jackson
Fred Hereford Orman	Madison
Eddie Brent Perdue	Wilcox
Oliver Kennedy Perkins	Florida
James Lon Price	Montgomery
Sloan Rowan	Lowndes

Walter Sanders Russell	Jackson
William Hogan Tipton, Jr.	Dallas
Graham Stewart Vinson	Florida
Oliver Taylor Vinson	Florida
Lawrence Wright	Montgomery

SPECIAL SOLDIER-STUDENTS

(ON DUTY WITH FIELD ARTILLERY UNIT R. O. T. C.)

John Cooper Ball	Lee
Richard Horace Brewer	Blount
Frederick Brunson	Crenshaw
William H. Burton	Lee
George Ray Carlisle	Lee
Joseph Bartow Daniels	Lee
David Hannis Finlay	Crenshaw
John Deloach King	Lee
George Moxham, Jr.	Lee
William Errol Pace	Crenshaw
Sheppard Paul Sanders	Crenshaw
Louis Sheely	Lee
John Waverly Sikes	Crenshaw
Ray Sikes	Crenshaw
Roy W. Smart	Lee
Hugh LaFayette Spriggs	Jefferson
Nandor Lester Toth	Lee
William Price Wade	Lawrence
David Leo Wood	Lee
Braxton Pierce Zuber	Lee

VOCATIONAL STUDENTS

PLACED IN TRAINING BY THE FEDERAL BOARD FOR VOCATIONAL EDUCATION.

Bonnie McKinley Allen	Lee
Daniel Marshall Andrews	Montgomery
Stephen Henry Baird	Mississippi
Radford Montgomery Barnard	Marshall
William Burton Barnes	Fayette
Fraisse Barras	Louisiana
Daisy Anderson Bennett	Jefferson
Martin Rogers Biggers	Mississippi
James Alvin Black	Monroe
Jack Blount	Louisiana
Matthew Ozra Boatwright	Lowndes
William Cornelius Bonnett	Coosa
Harvey Monroe Boshell	Walker
Bevie Lee Boyd	Marshall
Robert Hugh Boyd	Mississippi
Connie Peter Boyle	Louisiana
Guy Bowdin	Crenshaw
Oscar Bradford	Cullman
Blount Montgomery Breland	Mississippi
John Allen Browne	Tuscaloosa
Charles Jesse Bryan	Lee
Peter DeMarcus Burks	Talladega
Lem Berkley Calloway	Walker
Charles Watkins Campbell, Jr.	Louisiana
Jack Carlin	Scotland

Harold Chandler	Jefferson
Franklin Ashton Clarke	Covington
James Gordon Clark	Georgia
Herbert Earl Coleman	Mississippi
Adolph Allen Conner	Montgomery
Clifford Conway	Lee
Jesse Edward Cook	Jefferson
Herbert Earl Cooke	Mississippi
Robert Louis Cook	Etowah
George Mitchell Cortez	Louisiana
Horace C. Coskrey	Pike
Roy Bernard Courtney	Dallas
Cleborne Walthol Crawford	Elmore
Isaac LaFayette Cross	Jefferson
Malcolm Grant Dabney	Jefferson
Grady Woodfin Davis	Macon
William Andrews Day	Calhoun
Joseph Nix Deal	Houston
Charles Dean	Crenshaw
James Charles Duett	Elmore
Herbert Giles Edwards	Talladega
Marion Spencer Essary	Tuscaloosa
Sam W. Esslinger	Madison
Legal Tender Faircloth	Pike
Sherman Elbert Faught	Walker
Charles Ulysses Fiscus	Mississippi
Shelton Ford	Lee
John Isaac Freeman	Jefferson
Gordon Fuller	Butler
John D. Gandy	Mississippi
David Littleton Gann	Jackson
Daniel Payne Garrett	Clay
Eldridge Gay	DeKalb
Junious Gilbreath	DeKalb
Samuel Edward Giles	Jefferson
Rupert Glenn Gilmore	Pike
Jackson Thomas Gray	Lee
Hartridge Hall	Geneva
Jesse Adolphus Hall	Geneva
Stephen Ferguson Hall	Louisiana
James Edward Hamilton	Lauderdale
Hiram Letcher Hammack	Dale
Willis Jerdon Hammock	Marshall
Harry Hilliard Hardeman	Louisiana
Gladden Harrison	Montgomery
Haynie Harle Harrison	Montgomery
Pugh Haynes	Louisiana
Cicero Heath	Lee
Clarence Eugene Henderson	Jefferson
Frank Hendricks	Jefferson
John Thomas Henry	Mississippi
Brooksie Higgins	Chambers
Acie Everett Hill	Clarke
Russell Huston Hill	Blount
Lewis Judson Hoomes	Escambia
Emmett Glenn Howell	Jefferson
Rutherford Hayes Howell	Marion
Jeff Hughes	Jefferson
Hughie Lee Hurley	Randolph

Sylvester Garbriel Hurley	Louisiana
James Grover Hyatt	Washington
Jefferson Reuben Jackson	Chilton
William Lindsey Jarrell	Lee
Thomas William Otis Jarvis	Marshall
Hunter Hudson Johnson	Pike
Noah Johnson	St. Clair
Thomas Duncan Johnston	Montgomery
Guy Jones	Escambia
Herbert Russell Justice	Shelby
Oscar John Kattengell	Louisiana
Taylor Keene, Jr.	Tuscaloosa
James P. Keith	Jefferson
Henry Grady Kelley	Clay
John Harlan Kime	Louisiana
James Tait King	Lee
Alcu Michael LaGrange	Louisiana
Sanford Henry Lancaster	Etowah
Hiram M. Lane	Washington
Pierre Lee	Coffee
Maurice Henry Leonard	Louisiana
Ulysses Lewis	Jefferson
Dock Little	Covington
John Burrow Looney	Tennessee
William Ora Lybrand	DeKalb
Jesse McGee	Coffee
Reuben Levi McDaniel	Crenshaw
James Howard McInish	Coosa
William Daniel McIntosh	Geneva
Charles Franklin McLeod	Henry
Walter George Maiden	Conecuh
Orlando Joseph Manci	Baldwin
William Woods Mathis	Lamar
Eugene Allen Maynor	Blount
George Herbert Mayo	Marengo
Aaron Robert Mays	Marion
Robert Ernest Metcalf	Fayette
William Casper Miller	Butler
Graham Milstead	Choctaw
George Harry Mitchell	Mississippi
Lafayette Mitchell	Conecuh
Felix Thomas Morgan	Mississippi
John Tee Morgan	Chilton
Lester Lee Mooneyham	Barbour
Admiral Dewey Myers	Walker
James Lee Orr	Chambers
Lester Arms Page	Geneva
Pitt Parker	Talladega
Paul Petty	Covington
Robert Ray Pippin	Dale
Vachel Alexander Pollard	Cherokee
Staton G. Possien	Lee
John Stephens Powell, Jr.	Georgia
Herman Ennis Price	Jefferson
William Thomas Prichett	Marengo
Will Tom Pritchett	Bullock
Fred Marion Ray	Clay
Joseph Albert Rey	Louisiana
Charles Arthur Richter	Jefferson

William John Robinson	Mississippi
Walter Cairo Rodgers	Macon
Foreman Arden Rogers	Montgomery
William Calvin Roney	Geneva
Chester Sexton	Lauderdale
Rufus Scroggins	Barbour
Ervin Eugene Shelton	Blount
Loyd Hendrix Shirley	Henry
William Clenie Simmons	Mississippi
Victor Leon Smart	Pike
Amos Smith	Shelby
Branch Spalding	Virginia
Lemuel Bloodworth Standifer	Florida
Henchy Washington Stephens	Clarke
Leroy Greenberry Stephens	Clay
Percy Marion Stewart	Covington
Lovell Stockstill	Mississippi
Roy Stokes	Coffee
Amos Richard Taylor	Washington
Owen Luther Taylor	Jefferson
Porter Anderson Teague	Lee
Haden Thomas	Marshall
Elaza Perry Thomason	Chambers
Gideon Pitts Thompson, Jr.	Russell
Hugh Hill Thorp	Lee
Luther Earl Threeton	Louisiana
John Franklin Toole	Montgomery
Richard Henry Tuggle	Walker
Albert Turner	Dale
Samuel Guy Turnipseed	Bullock
Shelby Alto Vann	Houston
Stephen Gaston Veasey	Covington
Grover Cleveland Walding	Dale
William Isaac Walter, Jr.	Clarke
James John Franklin Ward	Coffee
Benjamin Terry Watson	Jefferson
Edward Osco Watson	Cullman
Alfred Thurber West	Jefferson
George Thomas Whidby	Washington
James Walter White	Hale
Lemmie Lee Williams	Crenshaw
Arthur Herbert Williamson	Lowndes
Robert Winfred Williamson	Clay
Samuel Lee Wilson	Winston

SUMMARY

Graduate Students	6
Senior Class	133
Junior Class	159
Sophomore Class	246
Freshman Class	355
Special Students	33
Veterinary Medicine	49
Pharmacy	43
Pre-medical Course	49
Applied Electricity	17
Auto Mechanics	15
Special Course in Architecture	6
Special Course in Agriculture	20
Soldiers (Attached to R. O. T. C. Units)	20
Vocational Students (Rehabilitation Courses)	187
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	1338
Deduct for names counted twice	65
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Total	1273

RESIDENCE BY STATES

Alabama	1071
Georgia	75
Florida	35
Louisiana	24
Mississippi	24
South Carolina	12
Tennessee	11
North Carolina	6
Arkansas	2
Kentucky	2
New Jersey	2
Texas	2
Virginia	2
Cuba	2
New York	1
Pennsylvania	1
Scotland	1

AFFILIATED SCHOOLS

<i>Location</i>	<i>Name of School</i>	<i>Principal</i>
Abbeville	Agricultural School	G. G. Yeuell
Albany	High School	Mrs. W. F. Jones
Albertville	Agricultural School	J. W. Letson
Alexander City	High School	J. M. Pearson
Aliceville	High School	
Alliance, Bessemer R. 5	High School	
Andalusia	High School	L. E. Brown
Anniston	High School	D. R. Murphy
Anniston	Noble Institute	Margaret Lea
Ashland	Clay Co. High School	J. R. Gibbons
Athens	Athens College Acad.	Dr. B. E. Glasgow
Athens	Greene University School	W. K. Green
Athens	Secondary Agri. School	J. M. Atkinson
Atmore	Escambia Co. High School	M. L. Orr
Attalla	Etowah Co. High School	J. I. Riddle
Auburn	Lee Co. High School	J. A. Parrish
Bay Minette	High School	Rowe Watson
Bessemer	High School	C. C. Mosley
Birmingham	B'ham-Southern College Training School	
Birmingham	Central High School	Dr. C. A. Brown
Birmingham	Loulie Compton Seminary	Hattie Morton
Clountsville	Secondary Agri. School	J. B. Pennington
Boaz	Snead Seminary	
Boyles	Jefferson Co. High School	T. W. Smith
Brewton	High School	B. I. Powers
Brewton	Downing Indus. Institute	J. M. Schofner
Bridgeport	Tennessee River Inst.	T. E. Elgin
Brundidge	Pike Co. High School	V. V. Norton
Butler	Choctaw Co. High School	F. S. Ward
Camden	Wilcox Co. High School	Claud Hardy
Camp Hill	High School	B. H. Wyatt
Camp Hill	Industrial Institute	Lyman Ward
Carbon Hill	High School	C. R. Weldon
Carrollton	High School	
Castleberry	Conecuh Co. High School	Sellers Stough
Centre	Cherokee Co. High School	C. W. Phillips
Centreville	Bibb Co. High School	J. W. Watson
Chatom	Washington Co. High School	W. V. Luckie
Citronelle	High School	J. W. C. Brown
Clanton	Chilton Co. High School	C. V. Thompson
Clayton	High School	J. R. Ward
Clio	Barbour Co. High School	W. A. McMurry
Collinsville	High School	W. T. Garrett
Columbia	Houston Co. High School	C. W. Johnson
Columbiana	Shelby Co. High School	J. R. Kimbrough
Cuba	High School	C. B. Snoddy
Cullman	Cullman Co. High School	C. H. Dowling
Dadeville	Tallapoosa Co. High School	J. F. G'azner
Daphne	Normal School	H. H. Holmes
Decatur	High School	J. F. Collins
Demopolis	High School	G. S. Clark
Dothan	High School	B. B. Baker
Double Springs	Winston Co. High School	E. A. Thomas
Eclectic	Elmore Co. High School	W. F. Maynor
Elba	High School	B. L. Balch
Elkmont	Limestone Co. High School	E. B. Baxter

Ensley	High School	E. E. Smith
Enterprise	Coffee Co. High School	R. K. Hood
Eufaula	High School	H. L. Upshaw
Eutaw	High School	L. K. Benson
Evergreen	Agricultural School	R. C. Powell
Fairhope	School of Organic Education	
Fayette	Fayette Co. High School	F. D. Graves
Five points	Consolidated School	A. S. Scott
Floral	Covington Co. High School	J. E. Hendley
Florence	Coffee High School	F. T. Appleby
Fort Deposit	Lowndes Co. High School	C. Buffington
Fort Payne	DeKalb Co. High School	N. J. Callan
Gadsden	High School	W. C. Griggs
Geneva	High School	J. J. Halladay
Georgiana	High School	H. N. Lee
Girard	High School	
Gordo	High School	V. B. Kissire
Greenville	High School	C. B. Gamble
Greensboro	Southern Military Academy	F. C. Shaw
Grove Hill	Clarke Co. High School	J. G. Austin
Guin	Marion Co. High School	J. M. Campbell
Guntersville	Marshall Co. High School	N. F. Greenhill
Gurley	Madison Co. High School	J. M. Laird
Haleyville	High School	C. A. Lloyd
Hamilton	Agricultural School	F. H. Chappelle
Hartford	Geneva Co. High School	E. H. Turner
Hartselle	Morgan Co. High School	J. C. Powell
Headland	Henry Co. High School	J. J. Yarbrough
Heflin	Cleburne Co. High School	E. J. Landers
Highland Home	Crenshaw Co. High School	C. C. Slaton
Huntsville	High School	R. C. Johnston
Huntsville	Wills School	R. P. Wills
Jackson	Agricultural School	F. M. Nelson
Jacksonville	High School	
Jasper	Walker Co. High School	J. A. Moore
LaFayette	High School	E. G. McGehee
Lanett	High School	W. S. Leatherwood
Leeds	High School	C. H. Tipton
Leighton	Colbert Co. High School	E. M. Thurman
Lincn	Talladega Co. High School	J. J. Moore
Linden	High School	R. C. Heard
Lineville	N. E. Alabama Agri. School	
Louisville	High School	J. L. Bates
Luverne	High School	J. D. Bradley
Madison	High School	C. B. Smith
Marbury	High School	J. D. Griffin
Marion	Judson Academy	Dr. Paul V. Bomar
Marion	Perry Co. High School	K. G. Hoover
Milltown	Chambers Co. High School	L. Leftwich
Mobile	University Military School	J. T. Wright
Mobile	High School	Frank L. Grove
Mobile	Knott School	Miss E. Knott
Mobile	Academy of the Visitation	Sister L. Loftus
Mobile	McGill Institute	Rev. W. A. Kerrigan
Monroeville	Monroe Co. High School	J. A. York
Montgomery	Barnes School	E. R. Barnes
Montgomery	Sidney Lanier High School	J. S. McCants
Montgomery	Margaret Booth School	
Montgomery	Edgar's School	R. B. Edgar

Morris, Rt. 2	Majestic High School	
Moulton	Lawrence Co. High School	A. B. Murphree
Moundville	Normal School	M. M. Matthews
New Market	High School	
Newton	Baptist Collegiate Institute	
Notasulga	Macon Co. High School	Thos. S. Bugg
Odenville	St. Clair High School	J. O. Sturdivant
Oneonta	Blount Co. High School	J. H. Graves
Opelika	High School	S. O. White
Opp	High School	J. E. Cheatam
Oxford	Calhoun Co. High School	S. B. Gibson
Ozark	High School	S. J. Laney
Pell City	High School	W. J. Baird
Phoenix City	High School	
Piedmont	High School	J. T. Vaughn
Pike Road	High School	
Plantersville	Dallas Co. High School	J. L. Moulder
Prattville	Autauga Co. High School	Alma McGaugh
Ramer	High School	A. C. Anderson
Red Level	High School	E. L. Stough
Reform	Pickens Co. High School	R. E. Hodnette
Roanoke	Handley High School	L. L. James
Rockford	Coosa Co. High School	Curtis Mathews
Rogersville	Lauderdale Co. High School	E. R. Stoker
Russellville	Franklin Co. High School	E. T. Bolding
Samson	High School	J. A. Lowery
Scottsboro	Jackson Co. High School	C. R. Wood
Selma	High School	A. F. Harman
Sheffield	High School	L. E. Creel
Slocomb	High School	
Springville	High School	Ira Peques
Sulligent	High School	
Sylacauga	Agricultural School	E. G. Elcan
Talladega	High School	Omer Carmichael
Tallassee	High School	L. O. Kyser
Thomaston	Marengo Co. High School	Elsworth Ellis
Thomasville	High School	L. C. Kersh
Thorsby	Thorsby Institute	
Town Creek	High School	
Troy	High School	J. R. McLure
Tuscaloosa	High School	S. C. Brown
Tuscumbia	High School	R. E. Thompson
Tuskegee	High School	J. K. Hunt
Union Springs	High School	E. S. Pugh
Uniontown	High School	J. H. Riddle
Vernon	Lamar Co. High School	J. A. Johnson
Wedowee	Randolph Co. High School	H. D. Weathers
Wetumpka	Agricultural School	H. C. McDonald
Winfield	High School	J. A. Kuykendall
York	Sumter Co. High School	J. W. Vann

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VOL. XVI.



NO. 3

THE BULLETIN

OF THE

ALABAMA POLYTECHNIC INSTITUTE

AUBURN

CATALOGUE
1920-1921

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BY THE INSTITUTE
MAY, 1921

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CATALOGUE
OF THE
ALABAMA
POLYTECHNIC INSTITUTE

STATE COLLEGE

FOR THE BENEFIT OF
AGRICULTURE AND THE MECHANIC ARTS

AUBURN, ALABAMA

1920-1921

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POST PUBLISHING COMPANY
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COLLEGE CALENDAR

1920

June 6-July 15 -----Summer Session
Sept. 5-6 -----Registration and entrance examinations
Sept. 7 -----Class work of first semester begins
Nov. 14-16 -----Mid-semester examinations
Nov. 24 -----Thanksgiving Day
Dec. 22 -----Christmas recess begins at noon

1921

Jan. 4 -----Class work resumed, 7:45 A. M.
Jan. 21 -----Semester examinations begin
Jan. 27 -----First semester ends
Jan. 28 -----Second semester begins; registration
Feb. 22 -----Washington's birthday
May 1 -----Field Day
May 18 -----Semester examinations begin
May 28 -----Commencement Sermon
May 29 -----Annual meeting of Board of Trustees; Alumni Day
May 30 -----Commencement Day

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C. M. SHERROD (*Eighth District*) ----- Courtland

TERM EXPIRES 1927

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Drake, Blake, Thomas, F. L., Hare, Sugg.

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Stivers, Folger, Spalding, Robinson, Miller.

Y. M. C. A.

Hinds, Cary, Ross, Judd, Duggar.

FRATERNITIES

Robinson, Starcher, Hixon, Grimes, Shi.

LITERARY SOCIETIES

Taylor, Atkinson, Saidla, Nichols, Isbell.

STUDENT PUBLICATIONS

Rutland, Funchess, Clark, Killebrew, Basore.

COLLEGE PUBLICATIONS

Clark, Wilmore, Shi, Gardner, Turner.

CLASS SCHEDULES

Biggin, Crenshaw, Hixon, Reynolds, Martin.

EXHIBITS

Fullan, Herron, Burns, Eaton, Worley.

STUDENT EMPLOYMENT

Price, Thomas, A. L., Hill, Biggin, Ferguson.

ALUMNI APPOINTMENTS

Duncan, Judd, Dunstan, Gardner, Marsh.

SCHOLARSHIPS

Wooten, Ross, Crenshaw, Fullan, Chesnutt.

DORMITORIES

Fortier, Donahue, Dunstan, Shi, Selby.

BOARDING HOUSES

Blake, Hill, Powell, Cauthen, Hanna.

REHABILITATION STUDENTS

Fullan, Clark, Brown, Hollifield, Cooper.

WOMEN STUDENTS

Misses Hollifield, Cooper, Feminear, Martin. ADVISORY BOARD
—Mesdames Hinds, Petrie, Hill.

EXPERIMENT STATION STAFF

SPRIGHT DOWELL, A. M., LL. D., President

J. F. DUGGAR, M. S., Director of Experiment Station

AGRICULTURE

J. F. Duggar, M. S., Agriculturist

E. F. Cauthen, B. S., Agriculturist

M. J. Funchess, M. S., Soils

J. T. Williamson, B. S., Superintendent of Cooperative Experiments

H. B. Tisdale, B. S., Associate Plant Breeder

CHEMISTRY

E. R. Miller, Ph. D., Chemist
Chemist

O. N. Massengale, B. S., Assistant

ANIMAL HUSBANDRY

J. C. Grimes, M. S., Animal Husbandman

W. H. Eaton, B. S., Dairyman

G. L. Burleson, B. S., Assistant

AGRICULTURAL ENGINEERING

M. L. Nichols, M. S., Agricultural Engineer

ENTOMOLOGY

W. E. Hinds, Ph. D., Entomologist

F. L. Thomas, Ph. D., Associate

J. M. Robinson, M. A., Assistant

John P. Bell, Clerk

HORTICULTURE

G. C. Starcher, B. S., Horticulturist

C. L. Isbell, M. S., Associate

Lyle Brown, B. S., Assistant

BOTANY

W. A. Gardner, A. M., Ph. D., Botanist

G. R. Johnstone, A. B., M. S., Assistant

PLANT PATHOLOGY

-----, Pathologist

VETERINARY SCIENCE

C. A. Cary, B. S., D. V. M., Veterinarian

AGRICULTURAL EDITOR

P. O. Davis, B. S.

AGRICULTURAL EXTENSION SERVICE

SPRIGHT DOWELL, A. M., LL. D., President

L. N. DUNCAN, M. S., Director

NAME	TITLE
K. G. Baker, B. S.	Beef Cattle Specialist
W. D. Barton, B. S.	District Agent
E. E. Binford, B. S.	District Agent
F. E. Boyd, M. S.	Agronomist
R. G. Briggs, M. A.,	Potato Specialist
Lyle Brown, B. S.	Assistant Horticulturist
P. O. Davis, B. S.	Agricultural Editor
J. C. Grimes, M. S.	Animal Husbandman
William Hardie, B. S.	Dairy Specialist
Jas. L. Herron, B. S.	State Boys' Club Leader
W. E. Hinds, Ph. D.	Entomologist
L. C. LeBron, B. S.	Assistant Agricultural Editor
M. L. Nichols, M. S.	Agricultural Engineer
M. H. Pearson, B. S.	Market Agent
G. C. Starcher, B. S.	Horticulturist
F. D. Stevens, B. S.	Farm Management Specialist
H. C. Wilson, D. V. M.	Hog Cholera Specialist
W. O. Winston, B. S.	District Agent
I. T. Quinn, B. S.	District Agent
Mary Feminear, B. S.	State Home Demonstration Agent
Helen Johnston, M. A.	Assistant State Home Dem. Agent
Gladys Tappan, B. Pd.	Poultry Specialist
Mina Willis, M. S.	Ass't. State Home Demonstration Agent
May I. Cureton	Ass't. State Home Demonstration Agent
Elizabeth Mauldin, B. A.	Ass't State Home Dem. Agent

STATE REGULATORY SERVICE

SPRIGHT DOWELL, A. M. LL. D.

President

CHEMISTRY

ROSS, BENNETT BATTLE, M. S., LL. D.

State Chemist

HARE, CLIFFORD LEROY M. S., M. A.

Associate Chemist

JACKSON, JAMES BAXTER, M. S.

Chief Analytical Chemist, Feeds, Fertilizers and Oils

MARSH, GEORGE HENRY, M. S.

Chief Analytical Chemist, Food, Drugs and Insecticides

BIDEZ, PAUL RUBENS

Assistant Chemist

MARTIN, HERBERT MARSHALL, M. S.,

Assistant Chemist

BASORE, CLEBURNE AMMEN, M. S., M. A.

Assistant Chemist

MASSENGALE, OLIVER NORFLEET, B. S.

Assistant Chemist

POLLARD, ELISHA FREDERICK, M. S.

Assistant Chemist

HOG CHOLERA SERUM PLANT

CARY, CHARLES ALLEN, B. S., D. V. M.

State Veterinarian

WINTERS, EVERETT SOMPOYAC, B. S., D. V. M.

Manager

MCADORY, ISAAC SADLER, B. S., M. D. C.

Assistant

STATE BOARD OF HORTICULTURE

STARCHER, GEORGE COLUMBUS, B. S.

State Horticulturist

HINDS, WARREN ELMER, B. S., Ph. D.

Consulting Entomologist

COOK, WILLIAM CLOUSTON

Nursery Inspector

GENERAL INFORMATION

SCOPE OF ACTIVITIES

PURPOSE

The Alabama Polytechnic Institute is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railway of Alabama. The purpose of the institution is to provide, in accordance with the Acts of Congress and of the State of Alabama under which it is maintained, a liberal, and thorough education, such as will afford the training required for efficient service in the different branches of industry in the application of science. All the practical work in the laboratories, in the shops, and on the farm is based on scientific principles. While industrial and technical work is emphasized, the importance of thorough general training and of culture is recognized in all the activities of the institution. In other words, the college aims to meet the demand for a broad general education, supplemented by adequate and appropriate technical training, adapted to the needs of its student body. In scope the work comprehends a broad field, including technical courses in the different phases of agriculture, engineering, architecture, pharmacy, veterinary medicine, agricultural education, home economics; the necessary training in the basic subjects of mathematics, and the natural and physical sciences; and general training in languages, history, economics, military tactics, and physical education.

ORGANIZATION

The institution is organized for three major lines of service; Resident Teaching, Experiment Station, and Extension Service. Resident Teaching, which includes the work of teaching at the institution is the oldest and perhaps the most distinctive feature of the college. The Experiment Station, by means of constant investigation and research, keeps the other two grand divisions in touch with the latest developments in science. The Extension Service, which is the clearing house of ideas, seeks to give currency throughout the State to the truths worked out by the Experiment Station and those used for Resident Teaching.

I. RESIDENT TEACHING

The instruction offered falls within seven divisions: (1) The College of Engineering and Architecture, (2) The College of Agricultural Sciences, (3) The Academic Departments, (4) The College of Veterinary Medicine, (5) The School of Agricultural Education, (6) The School of Pharmacy, and (7) The Department of Home Economics.

The College of Engineering and Architecture includes the following departments: (1) Civil Engineering, (2) Electrical Engineering, (3) Mechanical Engineering, (4) Chemical Engineering, (5) Highway Engineering, (6) Architectural Engineering, (7) Chemistry and Metallurgy, (8) Architecture, (9) Mechanical Drawing and Machine Design.

The work in the College of Agriculture is grouped as follows: (1) Agronomy, (2) Animal Husbandry, (3) Horticulture, (4) Veterinary Science, (5) Botany, (6) Entomology and Zoology, (7) Agricultural Chemistry, (8) Plant Pathology, (9) Agricultural Engineering.

The Academic Departments are as follows: (1) English, (2) Chemistry, (3) History, (4) Physics, (5) Botany, (6) Economics, (7) Modern Languages, (8) Latin, (9) Mathematics, (10) Drawing, (11) Mechanic Arts, (12) Military Science and Tactics.

The College of Veterinary Medicine comprises the following departments: (1) Veterinary Medicine, (2) Physiology, (3) Surgery, (4) Anatomy, (5) Therapeutics, (6) Pathology, (7) Histology, (8) Bacteriology, (9) Obstetrics, (10) Infectious Diseases, (11) Meat Inspection, (12) Milk Inspection, (13) Animal Husbandry.

The School of Agricultural Education offers courses leading to the degree of Bachelor of Science in Agricultural Education.

The School of Pharmacy comprises instruction in the following subjects: (1) Pharmacy, (2) Pharmacognosy, (3) Pharmacology, (4) Chemistry, (5) Physiology and Bacteriology, (6) Botany and Zoology, (7) Prescriptions, (8) Food and Drug Analysis, and (9) The Academic Departments.

The Department of Home Economics offers courses leading to the degree, Bachelor of Science in Home Economics and in Home Demonstration Work.

II. EXPERIMENT STATION

The Experiment Station was established under an Act of Congress of 1887 known as the Hatch Act which was supplemented in 1906 by a subsequent Act of Congress known as the Adams Act. The popular work of the Experiment Station is research, that is, investigation and experiment, or, to be more specific, the discovery and publication of exact and detailed information pertaining to agricultural sciences and practice. While the work of teaching students at the institution is the most distinctive feature of the college, it cannot do this in such a way as to promote the greatest social efficiency without the constant information and impetus which come from fresh, scientific investigation. The funds for the work of the

Station come from both Federal and State appropriations, the amount from the latter source being all too meager. Research work is continually in progress in each department of the College of Agriculture, such subjects being selected as are of the greatest importance to the farmers of Alabama, in so far as resources and facilities permit. The testing and breeding of seeds (cotton, corn, oats, and all staple crops), the testing of fertilizers, the promotion of profitable production of beef, pork, poultry, and sheep, the conservation of soils, improved methods of cultivation, drainage, the use of improved farm implements—this incomplete catalogue of a few of the leading activities of the Experiment Station indicates the range and value of the work.

III. EXTENSION SERVICE

The Extension Service which is organized in keeping with the Federal Smith-Lever Act of 1914 is a cooperative effort to carry practical instruction in agriculture and home economics to the thousands of people throughout the State who for various reasons cannot take advantage of the regular courses offered at the college. Literally, it is an attempt to carry the college to the people of the State in the effort to improve home conditions and to secure better farm practice, including organization and management. The actual work of the Service is carried on by specialists from the college, county farm demonstration agents, county home demonstration agents, boys' and girls' clubs, and by means of extension courses, publications, and correspondence.

While the emphasis in the past has been mainly with the individual farmer on his farm, we have now reached the point when this selfsame farmer should be taught to become a real student of his problems and a community leader, to the end not only of increasing the net income, but also of making country life more attractive.

SUMMER SESSION

A six-weeks' summer session of the college is conducted annually beginning on Monday following Commencement Day.

A strong faculty and a group of special lecturers are engaged and courses are offered for prospective teachers, principals, superintendents, supervisors, vocational agricultural teachers, college students desiring college credit, religious leaders, home demonstration agents and high school students.

WOMEN STUDENTS

Auburn is the oldest co-educational institution in the State and in the South with one exception, definite action having

been taken by the Board of Trustees in 1892, since when women have been regularly in attendance. In addition to the regular college courses, all of which have been open to women on the same terms as men since 1892, a special course in home economics, particularly for the training of county home demonstration agents, is offered.

At the meeting of the Board of Trustees in February, 1921, the conversion of Smith Hall into a dormitory for women and an appropriation for that purpose were authorized. This is a handsome brick structure with running water in each room and the other modern conveniences. In it will be housed the Dean of Women and other women members of the faculty.

The Dean of Women directs the interests of women students, both academic and social and is a member of the faculty committees which have the direction of student organizations and activities. Women students are required to occupy the dormitory, or such private boarding houses as accommodate women students exclusively, and then only such as are accredited by the Dean of Women.

The Dean of Women invites correspondence with parents and guardians, as well as with prospective students. She will know every girl personally and counsel with her according to her individual disposition and needs. The advice of parents, both as to scholarship and discipline, will be constantly sought, and, as nearly as possible, equal regulations for dormitory girls and those living in accredited private homes will be enforced. By regular weekly visits to those in private homes and by frequent conferences she will keep in touch with the general problems and conditions.

Because of the limitations of facilities and the desire to do a high class of work, the attendance for the session of 1921-22 will be limited to one hundred women. Smith Hall contains twenty-five rooms and two students will be expected to occupy each room. The monthly rental will be \$6.00 per student and reservations will be made only upon the payment of a month's rent in advance.

VOCATIONAL REHABILITATION

Out of the spirit of loyalty to the men who were in the service and in response to the requests of the Federal Board for Vocational Education, the resources of the college are placed within the reach of some two hundred wounded ex-service men who are in training here throughout the year. Approximately twenty-five per cent of the matriculates are enrolled in regular college classes, while three-fourths of them are taking special courses adapted to their previous training and needs. The col-

lege takes pride in cooperating cheerfully with the representatives of the Federal Board in the rehabilitation of disabled men, and the relations between the regular student body and the vocational men have been cordial. In addition to the regular college staff, the Federal Board maintains an office in the administration building of the college in which an advisor and a trained nurse are regularly employed. In this way all business matters concerning the college, the trainees, and the Federal Board are promptly and satisfactorily adjusted. Detailed information about the special work offered to vocational men is given in connection with the several courses.

MILITARY TRAINING

Instruction in military science and tactics is prescribed for all male members of the freshman and sophomore classes and first and second year students, except those with physical disabilities. Married students and also students over twenty-one years of age at the time of entering college who are permitted to devote their time to special study in chemistry, agriculture, pharmacy, veterinary medicine, etc., may be excused provided they take approved equivalent work.

Juniors and seniors who voluntarily elect to take military training receive fifty-three cents a day from the government during the entire year. Members of the junior and senior classes who do not take military training are required to take an approved equivalent.

RELIGIOUS SERVICES

Chapel exercises are held every week-day morning in Langdon Hall and all students unless excused on the written request of parents for religious scruples are required to attend.

The several churches of the town have strong ministers and while attendance at Sunday services is voluntary it is urged and expected that students will attend the church of their choice.

Each Sunday School has one or more Bible Classes for college men which are doing exceptionally fine work, while the several young people's societies and the Y. M. C. A. afford ready opportunities for religious training and service.

YOUNG MEN'S CHRISTIAN ASSOCIATION

The moral and Christian training of the students receives the earnest attention and thought of the faculty. The college has for many years been allied with the intercollegiate Young Men's Christian Association movement. A man of broad culture and successful experience in Y. M. C. A. and religious work has been selected as the General Secretary. The association exerts a vital and wholesome influence in the life of the college.

This association is regularly organized and a suite of well furnished rooms has been secured for its exclusive use. Through its weekly meetings and Bible Study Classes it exerts a wholesome Christian influence among the students

Students are advised to unite with the association when they enter the college.

PUBLIC LECTURES AND ENTERTAINMENTS

In addition to lectures by visiting speakers from time to time during the college session, the college provides a program including recitals by visiting musicians, lectures by well known thinkers, and other forms of entertainment for which the student pays a small fee.

When no other program interferes, carefully selected moving picture plays are available in the college auditorium for the recreation and entertainment of the students. Educational films of military, agricultural, economic, engineering and literary interest are shown weekly. Current events of international interest are shown twice weekly.

HONOR SYSTEM

During the session of 1910-11 the Honor System, which for years had been in effect in the higher classes, was adopted by the entire student body, to apply to all work done in class rooms and on examinations. Under this system the student is pledged neither to give nor receive any assistance, whatsoever.

All students upon entrance subscribe to the Honor System as in force at this institution.

Proper regulations for administering the system have been adopted by the student body.

The spirit of truth and honor, thus fostered in the examination room, is an efficient means of raising the scholarship, and tends to inculcate high ideals of honor among the students.

EXAMINATIONS AND REPORTS

Mid-semester examinations are held in November and March. Each examination occupies one hour.

At the end of each semester written examinations are held on the studies passed over that semester.

Reports giving the grade made by each student are sent to the parent or guardian.

Leaves of absence and honorable discharges will not be granted within two weeks of the examinations except for providential reasons.

Students must pass on *each semester's work*. In order to do this they must make 60 (Graduates 75) on the combination of class standing and examination. Each professor may combine

the class standing and the examination grade in any proportion he chooses.

DEFERRED EXAMINATIONS

A student absent from a semester examination on account of sickness or official or collegiate business may be given an examination at any time agreed upon by the professor concerned. A student absent from examination without such satisfactory excuse may obtain a special examination only on an application endorsed by the professor and approved by the faculty. In either case the examination should be put at some period that does not conflict with the student's other college work.

RE-EXAMINATIONS

A failure on any semester's work shall be made up at any date set by the professor. This date should be at some time during the third week of the next semester. If necessary, however, it may be set later by the professor. In either case it should be put at some period that does not conflict with the student's college duties.

A student whose semester grade falls below 50 will be required to repeat the semester's work in that subject in class, unless an application for a re-examination is endorsed by the professor and is approved by the faculty.

Only one re-examination will be given on any semester's work within one school year except by special permission of the faculty. Seniors who fail in more than one subject of the second semester of the senior year will not be permitted to stand re-examination before Commencement. No re-examination of a senior class student who is applying for a degree may be held later than the Saturday just preceding Commencement Sunday. Re-examination for deficiencies incurred by students before entering the senior class shall be set not later than the first week in April, except when deficiencies are being made up in class.

The grade of the student who stands a re-examination and passes shall be recorded as 60.

DISTINCTIONS AND HONORS

Certificates of highest distinction and of distinction are given on the basis of credits, one credit being considered as the equivalent of one recitation per week for one semester. Three hours of laboratory or shop work or drawing are counted as one hour of recitation. An undergraduate student taking less than an average of eighteen credit hours per semester will not be eligible for distinction. Certificates will be awarded to those students who have not received more than forty demerits, and who

comply with the scholarship requirements announced by the faculty.

Members of the senior class who attain highest distinction are published as *Graduates with Highest Honor*; those who attain distinction are published as *Graduates with Honor*; seniors who do not attain distinction, but who attain a grade of sixty per cent or above are published as *Graduates*.

DISCIPLINE REGULATIONS

The government of the college is administered by the president and faculty in accordance with the code of laws and regulations enacted by the trustees.

Each student upon entering is required to pledge himself to obey the rules and regulations of the college.

Attention to study and punctuality in attendance on recitations and all other duties are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using or causing to be brought into the college limits, intoxicating liquors.

Students are not permitted to participate in public entertainments or contests without previously obtaining the consent of the faculty.

No student who has failures against him in three subjects will be permitted to be absent from college for athletic contests or other purposes.

Only sickness, as reported by the surgeon, or absence by reason of family sickness, or official or collegiate business, will constitute a satisfactory excuse for absence from college work.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

SURGEON

The Surgeon is required to be present at the college daily, to visit at their quarters the students who are reported sick, and to give all requisite medical attention without other charge than the regular fee.

ACADEMIC YEAR

The academic year for 1921-22 commences on Wednesday, September 7, 1921, and ends on Tuesday, May 30, 1922, which is Commencement Day.

It is divided into two semesters: The first semester extends from the opening of the session to January 27th; the second

semester begins January 28th and continues to the end of the session.

SCHOLARSHIPS

The following scholarships have been established:

THE GRAYDON SCHOLARSHIP FUND OF \$3,000, established by the family of the late Augustus T. Graydon, of South Carolina, a loyal alumnus of the class of 1914.

SOUTHERN RAILWAY LOAN SCHOLARSHIP OF \$1,000, established by the Southern Railway in memory of the late W. W. Finley, President of the Southern Railway.

THE HENDERSON LOAN SCHOLARSHIP OF \$100.00, established by Judge W. L. Henderson of Miller's Ferry, Ala.

THE ALABAMA FEDERATION LOAN SCHOLARSHIP OF \$200 annually, established in 1917 by the Alabama Federation of Women's Clubs.

The conditions governing the award of this scholarship are as follows:

(a) The beneficiary shall be a young woman resident of Alabama, between the ages of 18 and 24 years, prepared to enter the junior class.

(b) She must be unable to complete her education without financial assistance.

(c) She must maintain the required standard in scholarship, attendance and conduct. Failing in any of these requirements, she may be replaced by another beneficiary appointed in the same manner.

(d) The beneficiary must be free from any other financial obligation.

(e) Repayment of this loan shall be made at the rate of \$100.00 a year, without interest, the first payment becoming due the first year after graduation or resignation.

(f) The beneficiary shall signify her perfect understanding of these terms by signing a paper of agreement to be presented to her by the President of the Alabama Polytechnic Institute.

All applications should be sent to the Chairman of the Federation Scholarship Committee, Mrs. C. Clifford Adams, 3421 Willow Avenue, Birmingham, Alabama.

THE UNITED DAUGHTERS OF THE CONFEDERACY LOAN SCHOLARSHIP OF \$100, established in 1908 by the Alabama Division of the United Daughters of the Confederacy to be awarded by a committee of the Division to a descendant of a Confederate veteran.

PRIZES

THE THOMAS ESSAY PRIZE, a gold medal offered by Hon. William H. Thomas, of Montgomery, Ala., for the best essay by an undergraduate student of the college. The essay must be written under the supervision of the Department of English. 1920: *Charles Carlisle Anderson*, Walker County.

The Alabama Chapter of the American Institute of Architects offers an Annual prize of Twenty Dollars worth of Architectural Books, for excellence in Architectural Design, to students in the courses of Architecture or Architectural Engineering. The basis of the competition varies from year to year and is determined by the Department of Architecture, in consultation with the officers of the Alabama Chapter.

THE MILLER REESE HUTCHISON MEDAL FOR ENGINEERING WRITING: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison of Orange, N. J., to the member of the senior class who does the most satisfactory work in the course of Engineering Writing. The work must be done under the supervision of the Department of Machine Design. 1920: *John Monroe Howarth*, Chambers County.

THE MILLER REESE HUTCHISON MEDAL FOR INVENTIVE DESIGN: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison of Orange, N. J., to the member of the junior class who does the most satisfactory work in the course of Inventive Design. The work must be original and must be done under the supervision of the Department of Machine Design. 1920: *Jacob Gottlieb*, Jefferson County.

THE J. B. CLARK DEBATER'S MEDAL, established in 1919 by J. B. Clark, Professor of Economics, is awarded annually to the best debater in the junior class.

PRIZE FOR BEST DEBATER, a medal given annually by the Board of Trustees to the best debater in the Wirt and Websterian Literary Societies. 1920, Wirt: *James Madison Hunnicutt*, Jefferson County.

PRIZE FOR BEST DECLAIMER IN LITERARY SOCIETIES. 1920, Wirt: *James Fanning Holt*, Montgomery County.

REGIMENTAL MEDAL, for the best drilled soldier. 1920: *Lewis Mathews Moore*, Barbour County.

PRIZE FOR BEST DRILLED COMPANY, a sword given by Board of Trustees. 1920: Engineer Company, *Captain Jacob Murphree Boyd*, Pike County.

MUSIC MEDAL. 1920: *James Douglas Foster, Jr.*, Lee County.

PORTER CUP FOR BEST ATHLETE: 1920, *Edward Creech Shirling*, Butler County.

LIBRARY

The Library is kept open nine hours daily for the use of students as a reading room and is thus made an important educational feature. A number of new volumes has been added during the current session, about two hundred of which were donated to the library by the American Library Association through the agency of Mrs. T. M. Owen, Director of the State Department of Archives and History.

THE O. D. SMITH COLLECTION

The library of the late Prof. O. D. Smith was presented to the college by Mrs. O. D. Smith, and is preserved as a memorial to his long and distinguished services to the college.

THE F. D. PEABODY MEMORIAL ROOM

Through the generosity of Mr. George Foster Peabody, New York City, an annual fund of fifty dollars, income from a permanent investment, is available for the purchase of books and furniture for the "F. D. Peabody Memorial Historical Seminary." F. D. Peabody, Esq., was a distinguished graduate of the Class of 1876.

THE W. D. TAYLOR MEMORIAL COLLECTION

The engineering library of the late W. D. Taylor, chief engineer of the Chicago and Alton Railway, was bequeathed by him to the Alabama Polytechnic Institute, and is preserved by the College as a memorial to this distinguished alumnus. Mr. Taylor was a graduate of the Class of '81, and was regarded as one of the leading civil engineers of the United States.

ALUMNI ASSOCIATION

The Auburn Alumni Association is an organization of the graduates and former students of the institution. A member of the association delivers the address on Monday of Commencement week, which is Alumni Day.

OFFICERS

President, John V. Denson, '05, Opelika.
Vice-President, M. F. Kahn, '00, Montgomery.
Vice-President, J. W. Gwin, '02, Birmingham.
Secretary-Treasurer, Leslie L. Gilbert, Auburn.
Orator, Wm. M. Williams, '96, Washington, D. C.

EXECUTIVE COUNCIL

A. C. Crowder, '89, Birmingham.
O. Ellery Edwards, '94, New York City.
J. P. Illges, '00, Columbus, Ga.
J. Haygood Paterson, '05, Montgomery.

Walker Reynolds, '08, Anniston.

Oliver J. Semmes, '97, Pensacola, Fla.

D. W. Peabody, '02, Atlanta, Ga.

John Rush, '99, Mobile.

THE AUBURN ALUMNUS

The official organ of the Alumni Association is the Auburn Alumnus which is published once each month during the college session and once in the summer. The Secretary-Treasurer of the Association is the managing editor of the publication.

SCHOLARSHIPS

A scholarship fund is administered by the Alumni Association. For information address the Secretary, Auburn Alumni Association, Auburn, Alabama.

The following scholarships have been established:

THE WILLIAM LEROY BROUN MEMORIAL SCHOLARSHIP OF \$170, established by the Alumni Society, in memory of the late distinguished president of the Institute.

THE LIGON SCHOLARSHIP OF \$170, established by Col. R. F. Ligon, Montgomery, Ala.

THE THOMAS SCHOLARSHIP OF \$170, established by Judge William H. Thomas, Montgomery, Ala.

THE BALL SCHOLARSHIP OF \$170, established by Mr. Fred S. Ball, Montgomery, Ala.

THE DUNKLIN SCHOLARSHIP OF \$600, established by Mr. and Mrs. J. C. Street, Opelika, Ala., in memory of Prof. J. T. Dunklin, former professor of Latin in the college.

THE 1908 SCHOLARSHIP OF \$150, established by the Class of 1908.

THE RANSOM MEMORIAL SCHOLARSHIP OF \$125 per year, established by the Alumni Association in memory of the late Prof. A. McB. Ransom, is available for students in the junior and senior classes of the course in chemistry and metallurgy.

THE JEWISH LOAN SCHOLARSHIP OF \$1,000, established by a former student of the college.

THE HENDERSON LOAN SCHOLARSHIP OF \$100 established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE C. S. YARBROUGH SCHOLARSHIP OF \$1,000, established by Dr. C. S. Yarbrough, Auburn, Ala.

The scholarships enumerated above are loan scholarships, granted to worthy young men and women, to be returned after graduation.

THE ROBERT E. LEE MEMORIAL SCHOLARSHIP OF \$100, an annual donation for the son of a Confederate veteran, established by the Children of the Confederacy of Alabama under the auspices of Mrs. Mary G. Pickens.

STUDENT ORGANIZATIONS

CADET BAND

The Band is maintained by the college for students who wish to develop further their ability and for new students who wish to learn music. The Band furnishes music for many college exercises and takes part in military maneuvers. Regular training which embodies instruction in the rudiments of music, in general musical information, and in the use of band instruments is given free of charge at band practice periods. College credit in lieu of R. O. T. C. work is allowed juniors and seniors. Private instruction may be secured by arrangement.

Membership is open to all students but is especially attractive to young musicians who have already had some training. Rewards are given to those who attain a recognized standing of loyalty and proficiency. Several scholarships are available for competent musicians.

Public concerts are given frequently and engagements in the state and other parts of the South are often scheduled. Requests for the Band should be made through the President.

THE ORCHESTRA

The orchestra is an organization of students who play orchestral instruments, and its size is limited only by the attainments and proficiency of the applicants for membership. Besides furnishing music for college exercises, its members find many opportunities of earning appreciable sums by playing at banquets, dances and other entertainments.

In connection with the band and orchestra practice, courses are offered in harmony, composition, and music appreciation for those students who wish to take advanced work in music. A certificate of proficiency may be obtained for satisfactory progress in the course.

THE GLEE CLUB

The Glee Club is an organization of thirty to forty student musicians who are interested in chorus singing, quartette work and musical specialties of all kinds, including skill in playing stringed instruments not used in the band or orchestra. Training under a competent director begins early in the session and continues throughout the year. Several trips to towns in the state and to other states are made during the year and those who attain a recognized standing of proficiency and go with the club on these trips are given suitable rewards, including under certain conditions, a certificate of musicianship.

Requests for the Glee Club should be made through the Director.

LITERARY SOCIETIES

There are three literary societies: the Wirt, the Websterian, and the Wilsonian. The Wirt and Websterian were organized in the East Alabama Male College in 1859-60. The Wilsonian was organized in the fall of 1919. These societies hold fall and spring contests in oratory, debating, and declamation.

To encourage the work of these societies the trustees directed in 1899 that a medal be awarded at each commencement to the best debater in each society. The college awards annually also a medal to the winner of the inter-society oratorical contest and a medal to the best declaimer in each society. The method of selecting the medal winners is determined by the faculty.

THE DRAMATIC CLUB

The Dramatic Club is an organization of students interested in the presentation of plays and in the theater. Membership is open to all students who have had some acting experience and to those who show theatrical talent. Two plays were presented during the past session and another has been selected for presentation in the fall.

ENGINEERING SOCIETIES

All students registered in the engineering division are eligible to membership in one or more of the technical and engineering societies that have been organized. The purpose of these organizations is to promote personal fellowship among the members, and a closer affiliation with practical engineers. Prominent engineers are invited from time to time to address these bodies, either singly or in groups, and educational films, lantern slides, and discussions by student members make up the programs. The following are in active operation.

Student Branch of the American Institute of Electrical Engineers. Organized and carried on by students in the electrical engineering course. Meetings twice a month.

Student Branch of the American Society of Mechanical Engineers. Organized and carried on by students in the mechanical engineering course. Meetings twice a month.

Student Branch of the American Society of Civil Engineers. Organized and carried on by students in the civil and highway engineering courses. Meetings twice a month.

Chemical Society. Organized and carried on by students in chemical engineering and other chemical courses. Meetings twice a month.

ARCHITECTURAL ASSOCIATION

The Architectural Association is open to all members of the college who take work in the department of architecture. Bi-weekly meetings are held in the architectural library, and papers presented on subjects of professional interest, not directly covered in regular courses; the discussions that follow are always lively ones. Current articles in the technical journals are also taken up. Nothing could furnish a more striking example of the enthusiastic attitude shown by architectural students everywhere toward their chosen work, than these gatherings of the architectural association.

AGRICULTURAL CLUB

The Agricultural Club was organized in 1907. All students interested in agriculture and the agricultural sciences are eligible for membership. The members of the Agricultural Faculty take an active part in the work of the club. Meetings are held once a week, and an effort is made to promote interest in all lines of agriculture, to develop a spirit of good fellowship among the students of the course, and bring them in contact with prominent workers of the science as opportunity offers to present them on the regular program.

VETERINARY MEDICAL ASSOCIATION

The Veterinary Medical Association was organized in 1907. The meetings are held bi-weekly in the veterinary building. Medical subjects are discussed by the members or by some invited speaker or member of the veterinary faculty. All students of the Veterinary College are eligible to membership.

The objects of the association are fraternal, intellectual and cultural. The annual banquet of this association is an occasion of good fellowship for the students, faculty, and veterinary alumni.

PHARMACEUTICAL ASSOCIATION

The Pharmaceutical Association is an organization maintained by the students of the department of pharmacy. It aims to cultivate a spirit of fraternity and friendship among its members. Meetings are held bi-monthly. At these meetings the membership is usually addressed by local or visiting speakers. Student programs are also prepared. The annual banquet is held in April.

PHI KAPPA PHI HONOR SOCIETY

The Phi Kappa Phi Honor Society is a national honor society organized for the purpose of encouraging scholarship and original study among students. Seniors who make a high average

on all subjects during the first three years of their course are eligible if they can meet requirements as to character and to individual initiative as demonstrated by usefulness and prominence in worthy student and other collegiate activities. Leadership is given most consideration if students pass the scholarship requirements.

The society gives a prize of ten dollars to the sophomore student who has attended the Alabama Polytechnic Institute for two years and who has, in the opinion of the Society, the best record in scholarship, character, and worthy student activities.

ADMISSION

All applicants for admission must present testimonials of good moral character and those who come from other colleges must bring certificates of honorable discharge or furnish other testimonials of good moral character.

Entrance examinations will be required of all new students except those who present certificates from accredited high schools or from colleges or universities.

The next session begins Wednesday, September 7th. Registration and classification of students begins on Monday, September 5th. Credits should be mailed during the summer, if possible, so that registration cards of new students may be prepared before registration begins. Applicants should make application to the Registrar who will supply the necessary blanks for high school credits.

Registration after class work begins involves additional administration work and seriously affects the work of the student. An additional fee of \$1.00 per day will be charged for each day registration is delayed beyond September 6th and January 28th, the maximum charge for late registration being fixed at \$5.00. No exception will be made to this regulation.

ENTRANCE REQUIREMENTS

The completion of a four-year course of at least *fifteen units* in an officially accredited high school or its equivalent as shown by examination is required for admission to the freshman class. Applicants will not be accepted as conditioned students.

The high school work of applicants for courses in engineering and architecture must include: English, three units; history, one unit; mathematics, two and one-half units (algebra 1½, plane geometry 1). For admission to any other course, the specified units are the same as for courses in engineering and architecture except that only two units are required in mathe-

matics (algebra 1, plane geometry 1). Applicants for a course in Latin (except Pharmaceutical Latin) must present three units in Latin.

Students in engineering and architecture who have not completed solid geometry in high school will be required to take this subject in college.

A unit is defined as a high school or preparatory course of five periods of forty to forty-five minutes each, weekly, throughout the academic year of nine months. In science courses, two laboratory periods are counted as the equivalent of one recitation period. No more than four units will be given for one year's work in the high school and no more than one unit will be given for work done in any six weeks' summer school.

Credit for admission will be given for any high school subject properly taught.

The following is the maximum number of units in each subject that will be accepted:

English	4 units
Algebra	2 units
Plane Geometry	1 unit
Solid Geometry	$\frac{1}{2}$ unit
Trigonometry	$\frac{1}{2}$ unit
Social Sciences (history, civics, and economics.)	4 units
Physics	1 unit
Chemistry	1 unit
General Science	1 unit
Physical Geography	1 unit
Biology	1 unit
Modern Languages	2 units
Latin	4 units
Music	2 units
Free Hand Drawing	2 units
Mechanical Drawing	2 units
Industrial Arts	2 units
Household Arts	2 units
Commercial Arts	2 units
Smith-Hughes Agriculture	1 to 6 units
Smith-Hughes Home Economics	1 to 6 units
Smith-Hughes Trade and Industries	1 to 6 units

ADMISSION BY CERTIFICATE

1. From accredited schools: Applicants from accredited schools will be admitted on presentation of official certificates covering the entrance requirements.

A list of accredited schools in Alabama is printed on the

last pages of this catalogue. A student from any other state will be admitted by certificate only if his school is accredited by the university of his state. All students are advised to complete the full course given in their high schools before applying for admission to college.

2. From non-accredited schools: From non-accredited schools certificates covering the entrance requirements may be accepted, provided the applicant stands satisfactory examinations in the following subjects:

(1) Rhetoric and Composition	1	unit
(2) English Classics	1	unit
(3) Algebra	1 or 1½	unit
(4) Plane Geometry	1	unit
(5) Fourth-year English	1	unit
(6) One other fourth-year subject	1	unit

ADMISSION BY EXAMINATION

Applicants without satisfactory certificates as set forth above must stand examination on *fifteen units*, including the *required* subjects.

ADMISSION FROM OTHER COLLEGES

Students coming from another college of similar rank will be assigned to the class and course to which they would belong in the institution which they have left, and will be required to make up only such back work as is necessary in order to carry on the regular studies of their class. In case they enter any other course they will be required to make up all work that they have not had.

Applicants for the B. S. degree must take the senior year's work in this institution.

ADVANCED STANDING

Advanced standing or college credit is not given in any subject on high school credits. Advanced standing will be given for work done in other colleges of similar rank, or in other specially approved institutions.

SPECIAL STUDENTS

Mature students who are not able to meet the regular entrance requirements may be admitted as special students, not candidates for a degree, provided they are prepared to do satisfactory work in the subjects which they desire to take.

No one will be admitted as a special student unless he is twenty years of age. No special student will be admitted to a course in English unless he has three entrance units on that subject or to a course in mathematics unless he has entrance

credit for two units in mathematics taken from algebra, plane and solid geometry. These entrance credits must be from an accredited school or by examination. Special students may become regular students by presenting satisfactory entrance credits.

NUMBER OF EXERCISES REQUIRED

All students are required to have not fewer than eighteen credit hours per week, not including physical training and military work. Three hours of laboratory work will be counted as one credit hour. A student whose record is satisfactory may be permitted to take three hours of extra work with special permission.

CHANGE IN COURSE

Students who change from one regular course to another will be required to make up satisfactorily to the head of the departments concerned all the work in the new course that they have not had. Permission to change from one course to another will be granted only at the beginning of a semester except in very urgent cases.

DEGREES

Each applicant for a degree may be required to write and submit a thesis on some leading subject connected with his course of study or, in lieu thereof, may conduct special laboratory or research work relating to such subject under the professor in charge in accordance with regulations prescribed by the faculty.

The degree, Bachelor of Science, is awarded upon the satisfactory completion of the following four-year courses: Civil Engineering, Highway Engineering, Electrical Engineering, Mechanical Engineering, Chemical Engineering, Chemistry and Metallurgy, Architecture, Architectural Engineering, Agriculture, Agricultural Education, Home Economics, Home Demonstration Work, Pharmacy, and the General Course.

The degree, Doctor of Veterinary Medicine (D. V. M.), is conferred upon the completion of the prescribed course in Veterinary Medicine.

The degree, Pharmaceutical Chemist (Ph. C.), is conferred upon the completion of the three-year course in Pharmacy, and the degree, Graduate in Pharmacy (Ph. G.), is conferred upon the completion of the two-year course in Pharmacy.

Each applicant for a degree must submit his application and course of study by the fifteenth of October in his senior year.

No degree will be conferred upon a candidate *in absentia* unless he is officially excused for providential reasons.

A candidate for a degree must, before May fifteenth of his senior year, show such ability to write clear and correct English as to satisfy the committee on students' use of English. To promote the habitual use of clear and correct English, the written work of every student in all his courses (theses, reports, quizzes, examination papers, etc.) is subject to inspection by the committee. If any student be found deficient, the committee will prescribe for him such work as in its judgment is proper, and this work must be done to the satisfaction of the committee before the student can obtain his degree.

GRADUATE COURSES

A more extended course of study may be taken by a graduate of this institution or of any college of equal grade. The completion of a course which leads to a post-graduate degree of Master of Science requires one year's residence, spent in the satisfactory prosecution of a course of study, with such laboratory work as may be approved by the faculty.

The candidate must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to his course, and must pass an examination at the close of each semester on the course of study prescribed, in which he must attain a grade of 75 per cent. The examination is written and also oral in the presence of the faculty.

The subject for the thesis must be submitted to the faculty for approval prior to January first, and the thesis given to the professor by May 1.

Applicants for post-graduate degrees and special students in post-senior studies are subject to the same general regulations as other students, and *pay the same fees*, but are exempt from all military duty.

The following courses are prescribed for the degrees named:

1. *Master of Science*.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class; or in special cases, with the approval of the faculty, a student may devote his full time to work in two departments, in each of which he has completed the full senior course.

2. *Master of Science in Pharmacy*.—Pharmacy and Chemistry.

PROFESSIONAL DEGREES IN ENGINEERING

1. *Degree in Course*.—The professional degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, or Chem-

ical Engineer, will be conferred upon graduate students upon the satisfactory completion of the course of study prescribed, a residence of one year being required for the completion of those courses.

A written application stating the degree desired and the course of study selected must be submitted to the faculty at the beginning of the session. A satisfactory thesis must be submitted by May 1.

The following courses of study are prescribed for the degrees named:

Civil Engineer.—Civil engineering and any two subjects selected from the following: Mathematics, analytical mechanics, mechanical engineering, electrical engineering, bacteriology.

Electrical Engineer.—Electrical engineering and mechanical engineering, or electrical engineering, mathematics and civil engineering.

Mechanical Engineer.—Mechanical engineering and machine design, or mechanical engineering, mathematics and civil engineering.

Chemical Engineer.—Electro-chemistry and advanced analytical or organic chemistry, together with one or more subjects selected from the following: Mechanical engineering, machine design, electrical engineering.

II. Degrees for Professional Work.—The above named professional degrees may be conferred upon graduates of the Alabama Polytechnic Institute in civil, electrical, mechanical, chemical and mining engineering upon complying with the following requirements:

1. The candidate must have spent at least four full years in the practice of that branch of engineering in which he graduated.

2. An approved thesis must be submitted to the faculty not later than May 1 of the year in which the degree is sought.

3. The student must show that he has filled satisfactorily a responsible position in charge of important engineering work. Written testimonials from employers or clients will be accepted as evidence of satisfactory service.

4. A written application, stating the degree desired, and giving a report or outline of the professional work upon which the application is based, must be submitted not later than January 1 of the year in which the degree is to be granted.

III. Special Students in Graduate Studies.—Students who are not graduates, but are qualified in special subjects to prosecute graduate studies, and desire to prepare themselves

more thoroughly for professional or special work in any of the departments of engineering, chemistry, pharmacy, veterinary science, or other subjects in which instruction is given, may, when qualified, with approval of the faculty, enter this higher department of study and have all the privileges of post-graduate students.

A certificate of proficiency will be given when any one subject of a post-graduate course is satisfactorily completed.

Two degrees will not be given in the same year.

EXPENSES

Fees are payable in two installments, one-half at the beginning of each semester.

COLLEGE FEES

The fees for the next session as fixed by the Board of Trustees are : Matriculation, incidental, library, and medical fees, \$25.00, payable in two installments of \$12.50.

STUDENT-ACTIVITIES FEE

This fee is \$11.00 of which \$6.00 is for admission to games played on the campus. The remainder is for the students' annual, college paper and lecture course.

NON-RESIDENTS

An additional matriculation fee of \$18.00 each semester is charged students who are not residents of Alabama. A student once entering as a non-resident will not be permitted to claim residence unless his parent or guardian becomes a resident of Alabama. The non-resident fee is remitted to sons of ministers of the gospel and, in the form of a free scholarship, to those students who obtained a distinction the preceding session.

CONTINGENT DEPOSIT

A contingent deposit of \$5.00 is required of each student on matriculation to cover any special or general damage to college property. General damages are assessed on the body of students. At the close of the session the contingent deposit, less charges, is refunded to the student.

LAUNDRY

The authorities of the college have made contract for the laundry of all male students, the charge being \$9.00 a semester, and each student must pay this fee on registration. Women students will make private arrangement for their laundry.

LABORATORY FEES

In addition to the above, laboratory fees are charged in the various courses to cover cost of materials used and damage to

equipment. The cost per student is dependent upon laboratory courses taken. The laboratory fees are shown on the next page.

DIPLOMA FEE

A diploma fee of \$10.00 is charged all students who receive a degree. This fee must be paid by Saturday preceding Commencement Day.

BOARDING

Students board at the dormitories or with families of the town of Auburn. The cost of board and lodging varies from \$25.00 to \$30.00 per month. Students who desire to reserve rooms in the dormitories should make application before September 1, a deposit of \$6.00 being required to secure a reservation.

The Board of Trustees has authorized the use of Smith Hall as a girls' dormitory in which the Dean of Women and other women teachers will reside.

On request the Registrar will make reservations with private boarding houses.

FUNDS OF STUDENTS

Parents or guardians are advised to deposit with the treasurer of the college funds desired for sons or wards, whether for college fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands and to pay all expenses incurred by the students.

The college cannot be held responsible for the expenses of a student unless the funds are deposited under specific instructions from the parent or guardian to the treasurer. No student should be permitted to have a large amount of pocket money.

AMOUNT TO BE PAID ON REGISTRATION

	1st Semester	2nd Semester
Fees (Matriculation, incidental, library and medical) -----	\$12.50	\$12.50
Student-Activities fee -----	5.50	5.50
Laundry (male students) -----	9.00	9.00
Contingent deposit -----	5.00	----
	<hr/>	<hr/>
For residents of Alabama -----	\$32.00	\$27.00

Non-residents of Alabama pay an additional matriculation fee of \$18.00 for each semester.

The contingent deposit of \$5.00 will be required in the second semester of students who were not registered during the first semester.

By order of the Trustees no fees are returnable except the unearned part of the laundry and contingent fees.

The above summary does not include laboratory fees which are listed below.

LABORATORY FEES

The schedule of laboratory fees for each semester is shown below:

Course	Fresh.	Soph.	Junior	Senior
General	\$5.00	\$5.00	\$2.00	\$2.00
Home Economics and				
Home Demonstration Work	5.00	5.00	5.00	5.00
Architecture	5.00	5.00	5.00	5.00
Architectural Engineering	5.00	5.00	5.00	5.00
Civil Engineering	6.00	5.00	6.00	2.00
Highway Engineering	6.00	5.00	6.00	4.00
Electrical Engineering	6.00	5.00	6.00	5.00
Mechanical Engineering	6.00	5.00	6.00	4.00
Chemical Engineering and				
Chemistry and Metallurgy ..	6.00	8.00	7.00	7.00
Agriculture	6.00	12.50	10.00*	---
Agricultural Education	6.00	12.50	10.00*	---
Pharmacy	6.00	15.00	15.00	10.00
Pre-Medical	10.00	10.00	---	---
Veterinary Medicine	11.00	15.00	6.00	3.00
	1st year	2nd year	3rd year	
Architecture	\$5.00	\$5.00	---	
Applied Electricity	5.00	8.00	---	
Wireless	5.00	---	---	
Pharmacy	15.00	15.00	15.00	

*Students who elect the following courses will pay the laboratory fee indicated:

Agronomy 401, 403 each	\$2.00
Agronomy 402	3.00
Agricultural Engineering 401	3.00
Agricultural Engineering 402	2.00
Botany 204	2.50
Botany 306, 401, 409, 410, 411, each	2.00
Entomology 302, 401, 402, 404, each	1.00
Horticulture 401, 402, each	1.50
R. O. T. C. (each semester)	1.00

Special students will pay the laboratory fees of the group to which the major portion of their work belongs.

COURSES OF INSTRUCTION

The numbers immediately following the subjects of study in the Courses of Instruction refer to the courses offered in each department and described in another section of the catalogue under "Description of Courses." The numbers in columns indicate the hours per week.

English, German, French, Latin or Spanish may be taken as language in junior and senior classes, provided there is no conflict in schedule. Approved courses in Education may be substituted for language in junior and senior classes in all courses.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

In junior and senior classes students who wish to substitute another subject for R. O. T. C. will be permitted to take approved equivalent work.

The courses as outlined prescribe in general nineteen credit hours in the freshman and sophomore classes and eighteen credit hours in the junior and senior classes exclusive of military work and physical training. Three hours laboratory work are equivalent to one credit hour. In special cases permission may be granted to take three additional credit hours.

ACADEMIC DEPARTMENTS

GENERAL COURSE

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
Latin 101-2 (or Spanish or Science)	3		3	
Elective -----	4	1	4	1
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 201-2, 203-4 or 205-6 -----	3		3	
History 201-2 -----	1	6	1	6
Physics 203-5, 205-6 -----	3	2	3	2
Psychology 201-2a -----	3		3	
Latin 201-2 (or Spanish or Science)	3		3	
Elective -----	3	1	3	1
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

English 301-2 -----	3		3	
Education 301-2 -----	2		2	
History 303-4 (or other Laboratory)		6		6
French 301-2 (or German, Spanish or Latin) -----	3		3	
Current Events, Hist. 305-6 -----	1		1	
Civics, Hist. 301-2 (or Science) ----	3		3	
Elective -----	4		4	
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 401 to 408 -----	2		2	
Economics 401-2 -----	2		2	
Education 401-2 -----	2		2	
History 303-4 (or other Laboratory)		6		6
French 401-2 (or German, Spanish or Latin) -----	3		3	
Governments of Europe, Hist. 401-2 (or Latin America, Hist. 405-6) --	3		3	
Elective -----	4		4	
R. O. T. C. -----	2	3	2	3

DEPARTMENT OF HOME ECONOMICS

COURSE IN HOME ECONOMICS

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Chemistry 101-2, 103-4 -----	3	2	3	2
Zoology 101-2 -----	2	2	2	2
Home Economics 101-2 -----	2	8	2	8
Home Economics 103-4 -----		6		6
Social Ethics -----	1		1	
Physical Education -----				

SOPHOMORE CLASS

English 201-2, 203-4 or 205-6 -----	3		3	
History 201-2 -----	1		1	
Chemistry -----	3			
Physics -----			3	
Physiology -----	3			
Bacteriology -----			1	6
Home Economics 201-2 -----	1	9	1	9
Home Economics 203-4 -----		6	1	3
Psychology 201-2a -----	3		3	
Physical Education -----				

JUNIOR CLASS

English 301-2 -----	3		3	
Home Economics 301-2 -----	2	3	1	6
Home Economics 305-6 -----	1	6	1	6
Electives -----	6		6	
Education 401-2 -----	3		3	
Physical Education -----				

SENIOR CLASS

Home Economics 401-2 -----	3		3	
Home Economics 403-4 -----	3		2	3
Home Economics 405-6 -----	2	3	2	3
Political Science, Hist 301-2 -----	3			
Rural Sociology, Ed. 304 -----			3	
Electives -----	6		6	
Physical Education -----				

COURSE IN HOME DEMONSTRATION WORK

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Chemistry 101-2, 103-4 -----	3	2	3	2
Zoology 101-2 -----	2	2	2	2
Home Economics 101-2 -----	2	8	2	8
Home Economics 103-4 -----		6		6
Social Ethics -----	1		1	
Physical Education -----				

SOPHOMORE CLASS

English 201-2, 203-4, 205-6 -----	3		3	
History 201-2 -----	1		1	
Chemistry -----	3			
Physics -----			3	
Bacteriology -----			1	6
Botany 201 -----	2	3		
Orchard Management, Hort. 201-2 --	1	2	2	2
Elements of Dairying, A. H. 201 ---	1	2		
Manual and Industrial Arts 255 ---	1	3		
Home Economics 201-2 -----	1	9	1	9
Home Economics 204 -----			1	3
Home Demonstration 202 -----			1	1
Physical Education -----				

JUNIOR CLASS

English 303-4 -----	3		3	
General Entomology 301 -----	2	2		
Economic Entomology 302 -----			2	2
Vegetable Gardening 302 -----			2	2
Landscape Gardening 301 -----	2			
Poultry 302 -----			2	
Home Economics 301-2 -----	2	3	1	6
Home Economics 305-6 -----	1	6	1	6
Home Demonstration 301-2 -----	1	2	1	2
Home Demonstration 303 -----		2		
Home Demonstration 305 -----	1			
Home Demonstration 307 -----	1	2		

SENIOR CLASS

English 401-2 -----	2		2	
Economics 401-2 -----	2		2	
Botany 409 -----	2	3		
Bee Culture 404 -----			2	2
Home Economics 401-2 -----	3		3	
Home Economics 403-4 -----	3		2	3
Home Economics 405-6 -----	2	3	2	3
Home Demonstration 402 -----			1	2
Home Demonstration 403-4 -----	2			2

COLLEGE OF AGRICULTURE

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Mathematics 101-2 -----	3		3	
English 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
History 101-2 -----	2		2	
Zoology 101-2 -----	2	2	2	2
Types and Breeds, A. H. 101-2 -----	1	2	1	2
Corn, Agr. 101 -----	1	2		
Plant Propagation, Hort. 102 -----			1	2
R. O. T. C. -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
History 201 -----	1			
Physics 203 -----	3			
Org. & Ag. Chemistry 201-2 -----	3		3	
Botany 201-2 -----	2	3	2	3
Chemical Lab., Chem. 205-6 -----	1	6	1	6
Small Grains and Weeds, Agr. 202 --			2	2
Dairying, A. H. 201 -----	1	2		
Live Stock Judging, A. H. 202 -----			1	2
Orchard Management, Hort. 201-2 --	1	2	2	2
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Required work

Bacteriology, Bot. 303 -----	1	4		
Vegetable Gardening, Hort. 302 ----			2	2
Geology, Chem. 341 -----	3			
Forage Crops, Agr. 302 -----			2	2
Entomology 301 -----	2	2		
Drainage and Terracing, Agr. Engr. 301 -----	2	3		
Farm Machinery, Agr. Engr. 302 ----			2	3
Soils, Agr. 304 -----			2	2

Elective Work

R. O. T. C. 301-2 -----	2	3	2	3
English 303-4 -----	3		3	
Education -----	3		3	
Modern Languages 301-2 -----	3		3	
Veterinary Science, Vet. 102 -----	2	3	2	3
Dairy Cattle Management, A. H. 301 --	1	2		
Horse and Mule Management and Sheep Production, A. H. 304 -----			1	2
Plant Physiology, Bot. 306 -----			2	4
Landscape Gardening, Hort. 301 ----	2			
Economic Entomology 302 -----			2	2
Poultry, A. H. 302 -----	2			
Floriculture, Hort. 404 -----	1	2		
Agr. Bacteriology, Bot. 304 -----			1	4
Systematic Botany, Bot. 307 ----	1	3		

SENIOR CLASS

Elective

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Feeds and Feeding, A. H. 401-2 ----	3		3	
Genetics, A. H. 407 -----	2			
Beef Cattle Production, A. H. 403 ---	2	2		
Milk Production, A. H. 405 -----		3		
Swine Production, A. H. 404 -----			2	2
Animal Breeding, A. H. 408 -----			2	
Dairy Manufacturing, A. H. 406 ----				3
Farm Motors, Agr. Engr. 401 -----	2	3		
Farm Buildings, Agr. Engr. 402 -----			2	3
Fertilizers and Soil Fertility, Agr. 401 -----	2	3		
Special Soils Problems, Agr. 402 ----			1	2
Farm Management, Agr. 406 -----			2	2
Fiber and Sirup Crops, Agr. 403 ---	2	2		
Advanced Crop Production, Agr. 404			2	
Diseases of Plants, Bot. 409 -----	2	3		
Plant Pathology, Bot. 410 -----			2	3
Advanced Ec. Entomology 401 -----	2	2		
Sanitary Entomology 402 -----			2	2
Bee Culture 404 -----			2	2
Fruit Growing, Hort. 401-2 -----	3	2	3	2
Forestry, Hort 403 -----	2			
Plant Breeding, Hort. 406 -----			2	
R. O. T. C. 401-2 -----	2	3	2	3
English 401 to 408 -----	2		2	
Economics 401-2 -----	2		2	
Modern Language 401-2 -----	3		3	
Education -----	3		3	
Plant Physiology, Bot. 401 -----	1	3		
Methods in Botany, Bot. 411 -----	1	3		
Ecology, Bot. 414 -----			1	3

SCHOOL OF AGRICULTURAL EDUCATION

SUBJECT	FRESHMAN CLASS		First Semester		Second Semester	
			Rec.	Lab.	Rec.	Lab.
Mathematics 101-2 -----	3				3	
English 101-2 -----	3				3	
Chemistry 101-2, 103-4 -----	3	2			3	2
History 101-2 -----	2				2	
Zoology 101-2 -----	2	2			2	2
Types and Breeds, A. H. 101-2 -----	1	2			1	2
Corn, Agr. 101 -----	1	2				
Plant Propagation, Hort. 102 -----					1	2
R. O. T. C. 101-2 -----	1	2			1	2
Physical Training -----						
SOPHOMORE CLASS						
Psychology, Ed. 201b -----	3					
Educational Psychology, Ed. 202b -----					3	
English 201-2, 203-4, 205-6 -----	3				3	
History 201 -----	1					
Org. Chemistry 201 -----	3					
Botany 201-2 -----	2	3			2	3
Chemical Laboratory, Chem. 205-6 -----	1	6			1	6
Small Grains and Weeds, Agr. 202 -----					2	2
Dairying, A. H. 201 -----	1	2				
Live Stock Judging, A. H. 202 -----					1	2
Orchard Management, Hort. 201-2 -----	1	2			2	2
R. O. T. C. -----	1	2			1	2
JUNIOR CLASS						
<i>Required Work</i>						
Introduction to Agricultural Education, Ed. 303 -----	3					
Rural Community Problems, Ed. 304 -----					3	
Bacteriology, Bot. 303 -----	1	4				
Vegetable Gardening, Hort. 302 -----					2	2
Forage Crops, Agr. 302 -----					2	2
Poultry, A. H. 302 -----	2	2				
Entomology 301 -----	2	2				
Drainage and Terracing, Agr. Engr. 301 -----	2	3				
Farm Machinery, Agr. Engr. 302 -----					2	3
Soils, Agr. 304 -----					2	2
<i>Elective Courses</i>						
R. O. T. C. -----	2	3			2	3
Education 301-2 -----	4				4	
Theory and Practice of Coaching -----	2	3			2	3
English 303-4 -----	3				3	
Veterinary Science, Vet. 102 -----	2	3			2	3
Dairy Cattle Management, A. H. 301 -----	1	2				
Horse and Mule Management and Sheep Production, A. H. 304 -----					1	2
Plant Physiology, Bot. 306 -----					2	4
Landscape Gardening, Hort. 301 -----	2					
Economic Entomology 302 -----					2	2
Floriculture, Hort. 404 -----	1	2				
Ag. Bacteriology, Bot. 304 -----					1	4
Systematic Botany, Bot. 307 -----	1	3				

SENIOR CLASS

Required Work

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Principles of Secondary Education, Ed. 402 -----	2			
Methods of Teaching Secondary School Subjects, Ed. 401 -----	2			
Methods of Teaching Vocational Agriculture, Ed. 407-8 -----	3	1½	3	1½
Practice Teaching, Ed. 412 -----			3	

Elective Courses

Education 402, 409-10 -----	2		4	
Feeds and Feeding 401-2 -----	3		3	
Genetics, A. H. 407 -----	2			
Beef Cattle Production -----	2	2		
Milk Production, A. H. 405 -----		3		
Swine Production, A. H. 404 -----			2	2
Animal Breeding, A. H. 408 -----			2	
Athletics and Coaching -----	2	3	2	3
Dairy Manufacturing, A. H. 406 -----				3
Farm Motors, Agr. Engr. 402 -----		3		
Farm Buildings, Agr. Engr. 402 -----			2	3
Farm Carpentry -----		6		
Farm Blacksmithing and Repair Work -----				6
Fertilizers and Soil Fertility, Agr. 401 -----	2	3		
Special Soils Problems, Agr. 402 -----			1	2
Farm Management, Agr. 406 -----			2	2
Fiber and Sirup Crops, Agr. 403 -----	2	2		
Advanced Crop Production, Agr. 404 -----			2	
Diseases of Plants, Bot. 409 -----	2	3		
Plant Pathology, Bot. 410 -----			2	3
Advanced Ec. Entomology 401 -----	2	3		
Sanitary Entomology 402 -----			2	2
Bee Culture 404 -----			2	2
Fruit Growing, Hort. 401-2 -----	3	2		
Plant Breeding, Hort. 406 -----			2	
Forestry, Hort. 403 -----	2			
R. O. T. C. 401-2 -----	2	3	2	3
English 401 to 408 -----	2		2	
Economics 401-2 -----	2		2	
Plant Physiology, Bot. 401 -----	1	3		
Ecology, Bot. 414 -----			1	3

COLLEGE OF ENGINEERING AND ARCHITECTURE

FRESHMAN CLASS

The following studies in the Freshman class are prescribed in the courses in civil, electrical, highway, mechanical, and chemical engineering and chemistry and metallurgy.

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 103, 104, 105, 106 -----	5		5	
Chemistry 101-2, 103-4 -----	3	2	3	2
Heat Engines, M. E. 107 -----	2			
Surveying, C. E. 102 -----			2	3
Drawing 151-2 -----		4		4
Shop, M. E. 101-2 -----		3		3
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

CHEMICAL ENGINEERING

SOPHOMORE CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Chemistry 205-6 -----	1	6	1	6
Physics 201-2 -----	3		3	
Drawing 254 -----		4		4
Applied Mechanics, M. E. 212 -----			3	
Shop work, M. E. 213-4 -----		4		4
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

English 305-6 -----	3		3	
Mathematics 301 -----	3			
Engineering Chemistry 306 -----			2	
Organic Chemistry 303-4 -----	2		3	
Industrial Chemistry 301-2 -----	3		3	
Geology, Chem. 341 -----	3			
Economic Geology 342 -----			2	
Quantitative Analysis 307 -----	1	8		
Organic Preparations 308 -----			1	8
Mineralogy 331-2 -----		4		4
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

French or German 301-2 -----	3		3	
Physical Chemistry 401 -----	5			
Metallurgy, Chem. 402 -----				5
Historical Chemistry 405 -----	2			
Electrical Engineering 305-6 -----	2		2	
Gas Engines, M. E. 108 -----			2	
Quantitative Analysis 409, 410 -----	1	12	1	12
Metallurgical Laboratory 403-4 -----		2		2
R. O. T. C. 401-2 -----	2	3	2	3

NOTE.—Students in this course who have taken a modern language in the junior year have the option of taking English or Economics in the senior year in lieu of German or French.

CHEMISTRY AND METALLURGY

The subjects of the freshman class are shown on page 48.

SOPHOMORE CLASS

Students in the sophomore class in this course may take either the course prescribed for sophomore students in chemical engineering or that prescribed for students taking the general course.

JUNIOR CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 305-6 -----	3		3	
Advanced Inorganic Chemistry 305	3			
Engineering Chemistry 306 -----			2	
Organic Chemistry 303-4 -----	2		3	
Industrial Chemistry 301-2 -----	3		3	
Geology, Chem. 341 -----	3			
Economic Geology, Chem. 342 -----			2	
Quantitative Analysis 307 -----	1	8		
Organic Preparations 308 -----			1	8
Mineralogy, Chem. 331-2 -----		4		4
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

French or German 301-2 -----	3		3	
Physical Chemistry 401 -----	5			
Metallurgy, Chem. 402 -----			5	
Historical Chemistry 405 -----	2			
Food Chemistry 407-8 -----	2		1	
Bacteriology, Vet. 221 -----			3	3
Quantitative Analysis 409, 410 -----	1	12	1	10
Metallurgical Laboratory 403 -----		2		2
R. O. T. C. 401-2 -----	2	3	2	3

NOTE.—Students in this course who have taken a modern language in the junior year have the option of taking English or Economics in the senior year in lieu of German or French.

CIVIL ENGINEERING

The subjects of the freshman class are shown on page 48.

SOPHOMORE CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Physics Lab. 205-6 -----		2		2
Railroad Surveying, C. E. 201 -----	2	2		
Topographic Surveying, C. E. 202 --			2	2
Descriptive Geometry, Dr. 253 -----	2	2		
Applied Mechanics, M. E. 212 -----			3	
Topographical Drawing, C. E. 204 --				2
Summer Vacation Work, C. E. 210 -----				
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Graphic Statics, C. E. 301 -----	1	2		
Structural Details, C. E. 302 -----			1	3
Strength of Materials, M. E. 321 -----	3			
Materials Laboratory, C. E. 303 -----		2		
Field Astronomy, C. E. 304 -----			3	2
Hydraulics, C. E. 306 -----			3	
Highway Engineering, H. E. 301-2 --	2		3	
Highway Laboratory, H. E. 303-4 ---		2		4
Geology, Chem. 341 -----	3			
Integral Calculus, Math. 301 (1921 only) -----	3			
Building Construction, Arch. 371, or Mineralogy, Chem. 331-2, or -----	2		2	
Electrical Engineering, E. E. 305-6 --				
English or an elective -----	3		3	
Summer Vacation Work, C. E. 310 --				
R. O. T. C. 301, 302 -----	2	3	2	3

SENIOR CLASS

Theory of Structures, C. E. 401-2 ---	3		3	
Structural Design, C. E. 403 -----	1	3		
Advanced Design, C. E. 404 -----			1	3
Reinforced Concrete, C. E. 405 -----	3			
Concrete Design, C. E. 406 -----			2	
Water Supply, C. E. 407 -----	3			
Sewerage, C. E. 408 -----			3	
Contracts and Valuation, C. E. 409 --	2			
Railroad Engineering, C. E. 410 -----			2	
Seminar and Foundations, C. E. 411 -----	1			
Seminar and Thesis, C. E. 412 -----			3	
Materials Laboratory, C. E. 303 (1921 only) -----		3		
Electives -----	3		3	
Inspection Trip, C. E. 414 -----				
R. O. T. C. 401-2 -----	2	3	2	3

ELECTRICAL ENGINEERING

The subjects of the freshman class are shown on page 48.

SOPHOMORE CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203, 204 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201, 202 -----	3		3	
Physical Laboratory 205-6 -----		2		2
Descriptive Geometry, Dr. 253 -----	2	4		
Engineering Drawing 254 -----				4
Shop Work, M. E. 213-4 -----		6		6
Applied Mechanics, M. E. 212 -----			3	
R. O. T. C. 201, 202 -----	1	2	1	2

JUNIOR CLASS

Electrical Engineering 301-2 -----	3		3	
Electrical Laboratory 313-4 -----		4		4
Electrical Measurements 307-8 -----	1		1	
Strength Materials, M. E. 321 -----	3			
Theory of Machines, Dr. 356 -----			3	
Machine Design, Dr. 361-2 -----		4		4
Graphic Statics, Dr. 355 -----	2			
Hydraulics, M. E. 346 -----			3	
Mechanical Laboratory, M. E. 331-2 -----		2		2
Materials of Engineering, M. E. 348 -----			2	
Mathematics 301 (1921 only) -----	3			
English or Elective -----	3		3	
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

Electrical Engineering 421-2 -----	5		4	
Electrical Laboratory 425-6 -----		3		3
Thermodynamics, M. E. 443 -----	3			
Power Plants, M. E. 442 -----			3	
Mechanical Laboratory, M. E. 451 -----		3		
Machine Design, Dr. 467-8 -----	2		2	
Machine Design, Dr. 469-470 -----		4		4
Electrical Railways 430 -----			2	
Electricity and Mag., Ph. 401-2 -----	2		2	
Electives -----	3		3	
R. O. T. C. 401-2 -----	2	3	2	3

HIGHWAY ENGINEERING

The subjects of the freshman class are shown on page 48.

SOPHOMORE CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Physical Laboratory 205-6 -----		2		2
Railroad Surveying, C. E. 201 -----	2	2		
Topographic Surveying, C. E. 202 -----			2	2
Descriptive Geometry, Dr. 253 -----	2	2		
Topographic Drawing, C. E. 204 -----				2
Applied Mechanics -----			3	
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Highway Engineering 301-2 -----	2		3	
Highway Laboratory 303, 304, -----		2		4
Mineralogy, Chem. 331-2 -----		4		4
Geology, Chem. 341 -----	3			
Graphic Statics, C. E. 301 -----	1	2		
Structural Details, C. E. 302 -----			1	3
Strength Materials, M. E. 321 -----	3			
Hydraulics, C. E. 306 -----			3	
Materials Laboratory, C. E. 303 -----		2		
Field Astronomy, C. E. 304 -----			3	2
Mathematics 301 (1921 only) -----	3			
English or Elective -----	3		3	
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

Theory of Structures, C. E. 401-2 -----	3		3	
Highway Engineering 405-6 -----	3		3	
Highway Laboratory 407-8 -----		3		6
Reinforced Concrete, C. E. 405 -----	3			
Concrete Design, C. E. 406 -----			2	
Structural Design, C. E. 403 -----	1	3		
Advanced Design, C. E. 404 -----			1	3
Economic Geology, Chem. 342 -----			2	
Engineering Valuation, C. E. 409 -----	1			
Contracts and Spec., Dr. 475 -----	1			
Seminar, C. E. 411, 412 -----	1		1	
Elective -----	3		3	
R. O. T. C. 401 -----	2	3	2	3

MECHANICAL ENGINEERING

The subjects of the freshman class are shown on page 48.

SOPHOMORE CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Physical Laboratory 205-6 -----		2		2
Descriptive Geometry, Dr. 253 -----	2	4		
Engineering Drawing 254 -----				4
Shop Work, M. E. 213-4 -----		6		6
Applied Mechanics, M. E. 212 -----			3	
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Strength Materials, M. E. 321 -----	3			
Theory of Machines, Dr. 356 -----			3	
Machine Design, Dr. 361-2 -----		4		4
Graphic Statics, Dr. 355 -----	2			
Hydraulics, M. E. 346 -----			3	
Mechanical Laboratory 331-2 -----		2		2
Materials Engineering, M. E. 348 -----				2
Mathematics 301 (1921 only) -----	3			
Electrical Engineering 303-4 -----	3		3	
Electrical Laboratory 313-4 -----		4		4
Electrical Measurements 307-8 -----	1		1	
English or Elective -----	3		3	
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

Thermodynamics, M. E. 443 -----	5			
Heating and Vent., M. E. 446 -----			2	
Hydraulics, M. E. 453 -----	3			
Mechanical Laboratory, M. E. 451 --		3		6
Machine Design, Dr. 467-8 -----	2		2	
Machine Design, Dr. 469-470 -----		4		4
Industrial Management, M. E. 448 --			2	
Power plants, M. E. 442 -----			3	
Materials Engineering, M. E. 348 ---			2	
Contracts and Spec., Dr. 475 -----	1			
Law and Valuation, C. E. 409 -----	1			
Elective -----	3		3	
R. O. T. C. 401-2 -----	2	3	2	3

TWO YEAR COURSE IN APPLIED ELECTRICITY

FIRST YEAR

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
Mathematics 103, 104, 105, 106 -----	5		5	
Electrical Engineering 305-6 -----	3		3	
Electrical Laboratory 313-4 -----		4		4
Heat Engines, M. E. 107 -----	2			
Gas Engines, M. E. 108 -----			2	
Drawing 151-2 -----		4		4
Shop Work, M. E. 101, 102 -----		3		3
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SECOND YEAR

English 203-4 -----	3		3	
Chemistry -----	3	2	3	2
Electrical Engineering 431-2-3-4 -----	3	4	3	8
Drawing 253-4 -----		4		4
Electric Railways 430 -----			2	
Shop Work, M. E. 213-4 -----		6		6
Mechanical Laboratory, M. E. 234 -----		2		
Telephone Engineering, E. E. 427-429 -----	2	2		
R. O. T. C. 201-2 -----	1	2	1	2

SPECIAL COURSE IN WIRELESS TELEGRAPHY

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
Mathematics 103, 104, 105, 106 -----	5		5	
Electrical Engineering 305, 306 -----	3		3	
Electrical Laboratory 313-4 -----		4		4
Wireless Telegraphy, E. E. 133-4 -----	1	4	1	4
Heat Engines, M. E. 107 -----	2			
Gas Engines, M. E. 108 -----			2	
Drawing 151-2 -----		4		4
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

ARCHITECTURE

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 101-2 -----	3		3	
Chemistry 101-2 -----	3	2	3	2
Freehand Drawing, Arch. 121-2 ----		4		4
Water Color, Arch. 123-4 -----		4		4
Descriptive Geometry, Arch. 141-2 --	1	3	1	3
Architectural Design, Arch. 291-2 --	1	9		9
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training 101-2 -----				

SOPHOMORE CLASS

English 203-4 -----	3		3	
History 201 -----	1			
History of Architecture, Arch 201-2 ..	2		2	
French 301-2 -----	3		3	
Physics 201-2 -----	3		3	
Applied Mechanics, M. E. 212 -----			3	
Charcoal Drawing, Arch. 221-2 -----		4		4
Water Color, Arch. 223-4 -----		4		4
Surveying, C. E. 310 -----			2	2
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

History of Architecture, Arch. 301-2 ..	2		2	
Building Construction, Arch. 371-2 --	2		2	
Plumbing and Drainage, Arch. 374 --			1	
Strength of Materials, M. E. 321 ----	3			
Graphic Statics, C. E. 301 -----	1	3		
Structural Details, C. E. 302 -----			1	3
Surveying, C. E. 308 -----			2	2
French 301-2 -----	3		3	
Clay Modeling, Arch. 325 -----		4		
Architectural Design, Arch. 391-2 --		15		15
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

History of Painting, Arch. 403 -----	1			
History of Sculpture, Arch. 404 -----			1	
Wiring and Illumination, E. E. 411 --	2			
Heating and Ventilation, M. E. 446 --			2	
Theory of Structures, C. E. 401 -----	3			
Structural Design, C. E. 403-4 -----	1	3	1	3
Reinforced Concrete, C. E. 405 -----	3			
Concrete Design, C. E. 406 -----			2	
Life Class, Arch. 427-8 -----		4		4
Working Drawings and Specifications, Arch. 478 -----			1	6
Architectural Design and Thesis, Arch. 491-2 -----		21		21
R. O. T. C. 401-2 -----	2	3	2	3

ARCHITECTURAL ENGINEERING

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 103, 104, 105, 106 -----	5		5	
Chemistry 101-2 -----	3	2	3	2
Freehand Drawing, Arch 121-2 -----		4		4
Descriptive Geometry, Arch 141-2 --	1	3	1	3
Architectural Design, Arch. 191-2 --	1	6	1	6
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 203-4 -----	3		3	
History 201 -----	1			
History of Architecture, Arch. 201-2 ..	2		2	
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Applied Mechanics, M. E. 212 -----			3	
Charcoal Drawing, Arch. 221-2 -----		4		4
Architectural Design, Arch. 291-2 --	1	9		9
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

History of Architecture, Arch. 301-2 ..	2		2	
Building Construction, Arch. 371-2 --	2		2	
Plumbing and Drainage, Arch. 374 --			1	
Mathematics 301 -----	3			
Strength of Materials, M. E. 321 -----	3			
Testing Laboratory, C. E. 303 -----		2		
Graphic Statics, C. E. 301 -----	1	3		
Structural Details, C. E. 302 -----			1	3
Hydraulics, C. E. 304 -----			3	
Surveying, C. E. 310 -----			2	2
Architectural Design, Arch 391-2 ---		15		15
R. O. T. C. 301-2 -----	2	3	2	3

SENIOR CLASS

Wiring and Illumination, E. E. 411 --	2			
Heating and Ventilation, M. E. 446 --			2	
Theory of Structures, C. E. 401-2 ---	3		3	
Structural Design, C. E. 403-4 -----	1	3	1	3
Reinforced Concrete, C. E. 405 -----	3			
Concrete Design, C. E. 406 -----			2	
Foundations, C. E. 411 -----	1			
Water Supply, C. E. 407 -----	3			
Sewerage, C. E. 408 -----			3	
Working Drawings and Specifications, Arch. 478 -----			1	6
Electives and Thesis -----	3		3	
R. O. T. C. 401-2 -----	2	3	2	3

SPECIAL COURSE IN ARCHITECTURE

FIRST YEAR

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
History of Architecture, Arch. 201-2	2		2	
Freehand Drawing, Arch. 121-2		4		4
Water Color, Arch. 123-4		4		4
Clay Modeling, Arch. 325		4		
Descriptive Geometry, Arch. 141-2	1	3	1	3
Building Construction, Arch. 371-2	2		2	
Plumbing and Drainage, Arch. 374			1	
Architectural Design, Arch. 291-2	1	9		9
Electives	6		6	
R. O. T. C. 101-2	1	2	1	2
Physical Training				

SECOND YEAR

History of Architecture, Arch. 301-2	2		2	
History of Painting, Arch. 403	1			
History of Sculpture, Arch. 404			1	
Charcoal Drawing, Arch. 221-2		4		4
Water Color Arch. 223-4		4		4
Life Class, Arch. 427-8		4		4
Wiring and Illumination, E. E. 411	2			
Heating and Ventilaton, M. E. 446			2	
Architectural Design, Arch. 391-2		15		15
Electives	5		5	
R. O. T. C. 201-2	1	2	1	2

SCHOOL OF PHARMACY

TWO-YEAR COURSE IN PHARMACY

FIRST YEAR

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Pharmacy Latin 105-----	3			
Chemistry 101-2-----	3		3	
Physiology Vet. 101-----	2		2	
Botany 201-204-----	2	3	2	3
Qualitative Analysis 205-6-----	1	6	1	6
Pharmacy 201-----	5			
Pharmacy Laboratory 202-----			2	6
Pharmaceutical Chemistry 302-----			3	
Pharmacognosy 304-----			4	
R. O. T. C. 101-2-----	1	2	1	2
Physical Training-----				

SECOND YEAR

Pharmacy 301-----	3	12		
Organic Chemistry 303-4-----	2		3	
Quantitative Analysis 307-----	1	8		
Toxicology and Urinalysis, Ch. 414-----			1	3
Bacteriology, Vet. 222-----			2	4
Pharmacognosy 403-----	5			
U. S. P. 405-----			4	
Prescriptions and Incompatibilities 404-----	3			
Pharmacy 402-----			2	4
Pharmacology 406-----			3	
Thesis-----				
R. O. T. C. 201-2-----	1	2	1	2

THREE-YEAR COURSE IN PHARMACY

FIRST YEAR

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2-----	3		3	
Latin 105-----	3			
Chemistry 101-2-----	3		3	
Pharmacy 201-----	5			
Pharmacy Laboratory 202-----			2	6
Pharmaceutical Chemistry 302-----			3	
Qualitative Analysis, Ch. 205-----	1	6	1	6
Zoology 101-2-----	2	2	2	2
R. O. T. C. 101-2-----	1	2	1	2
Physical Training-----				

SECOND YEAR

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Physics 204, 205-6 -----	3	2	3	2
Physiology, Vet. 101 -----	2		2	
Botany 201-4 -----	2	3	2	3
German or French 301-2 -----	3		3	
Organic Chemistry, Ch. 303-4 -----	2		3	
Comp. Anatomy, Zoology 201 -----	2	3		
Pharmacognosy 304 -----			4	
Quantitative Analysis, Ch. 307 -----	1	8		
Toxicology and Urinalysis, Ch. 414 -----			1	3
R. O. T. C. 201-2 -----	1	2	1	2

THIRD YEAR

German or French 401-2 -----	3		3	
Bacteriology, Vet. 221 -----			2	4
Organic Chemical Laboratory, Ch. 210 -----			1	6
Food and Drugs 407 -----		9		
Pharmacy 301 -----	1	12		
Pharmacognosy 403 -----	5			
Pharmacy 402 -----			2	4
Prescriptions and Incompatibilities 404 -----	3			
United States Pharmacopoeia -----			4	
Pharmacology 406 -----			3	
Thesis -----				4
R. O. T. C. 301-2 -----	2	3	2	3

FOUR-YEAR COURSE IN PHARMACY

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Latin 103 or 105* -----	3		3	
Mathematics 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
Zoology 101-2 -----	2	2	2	2
R. O. T. C. 101 -----	1	2	1	2
Physical Training -----				

*If Latin 105 is taken, Zoology 202 must be taken, second semester.

SOPHOMORE CLASS

Physics 203-4, 205-6 -----	3	2	3	2
History 201-2 -----	1		1	
Botany 201-4 -----	2	3	2	3
English 201-2 -----	2		2	
Physiology, Vet. 101 -----	2		2	
Qualitative Analysis, Chem. 205-6 -----	1	6	1	6
Pharmacy 201 -----	5			
Pharmacy Laboratory 202 -----			2	6
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
German or French 301-2 -----	3		3	
Quantitative Analysis 307 -----	1	8		
Organic Chemistry 303-4 -----	2		3	
Organic Laboratory 210 -----			1	8
Pharmacy 301 -----	3	12		
Phar. Chem. 303 -----			3	
Pharmacognosy 304 -----			4	
R. O. T. C. 301-2 -----	2	3	2	3
Elective -----	3		3	

SENIOR CLASS

Bacteriology, Vet. 221-2 -----			2	4
Pharmacognosy 403 -----	5			
German or French 401-2 -----	3		3	
Food and Drugs, Ch. 407 -----		12		
Toxicol and Urinal., Ch. 414 -----			1	3
U. S. P. 405 -----			4	
Presc. and Incompat. 404 -----	3			
Pharmacology 406 -----			3	
Pharmacy 402 -----			2	4
Thesis -----				4
R. O. T. C. 401 -----	2	3	2	3
Elective -----	3			

PRE-MEDICAL COURSE

FIRST YEAR

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Chemistry 101-2, 105-6 -----	3	6	3	6
English 101-2 -----	3		3	
Free Hand Drawing, Arch. 121-2 ---		4		4
Mathematics 101-2 -----	3		3	
Modern Language 301-2 -----	3		3	
Zoology 101-2 -----	2	2	2	2
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SECOND YEAR

Botany 201-204 -----	2	3	2	3
Organic Chemistry 203, 210 -----	3		1	6
Psychology, Ed. 201a -----	3			
Comp. Anatomy, Zoology 202 -----			2	3
English 201-2 -----	3		3	
Modern Language 401-2 -----	3		3	
Physics 203-4, 205-6 -----	3	3	3	3
R. O. T. C. 201-2 -----	1	2	1	2

COLLEGE OF VETERINARY MEDICINE

FRESHMAN CLASS

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 104 -----	3		3	
Anatomy 105 -----		10		8
Histology 106 -----	2	4	2	4
General Chemistry 103 -----	3		3	
Chemical Laboratory 103 -----	1	6	1	6
Judging 107-8 -----	1	2	1	2
Physiology 101 -----	2		2	
Embryology 109 -----		3		3
Clinics 111 -----		3		3
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

Anatomy 218 -----		8		8
Bacteriology 221 -----	2	4	2	4
Obstetrics 222 -----	4			
Vet. Medicine 219 -----			3	
Pharmacy 216 -----			2	6
Vet. Physiology 217 -----	2	4	2	
Organic Chemistry 214 -----	3			
Physiological Chemistry 215 -----			3	
Clinics 220 -----		6		6
Botany 201-206 -----			2	3
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Veterinary Medicine 325 -----	3		3	
Clinical Diagnosis 331 -----	2			
Shoeing 329 -----			2	2
Surgery 323 -----			3	
Parasites 327 -----	3			
Infectious Diseases 328 -----			3	
Anatomy 324 -----		8		10
Clinics 332 -----		8		8
Pathology 330 -----	3	6		
Toxicology and Urinalysis 326 -----			1	4

SENIOR CLASS

Therapeutics 431 -----	3		3	
Surgery 432 -----	3		3	
Veterinary Medicine 433 -----	3			
Surgical Exercises 434 -----			2	3
Meat Inspection 435 -----	3	2		
Milk Inspection 436 -----			3	2
Breeding 437 -----			2	
Dairying 438 -----	1	2		
Clinics 440 -----		8		10
Feeding 439 -----	3			
Thesis 441 -----		4		4

DESCRIPTION OF COURSES

ACADEMIC DEPARTMENTS

ECONOMICS

Professor Clark

401-2. PRINCIPLES OF ECONOMICS.—Sem. 1 and 2. Rec. 2. Lab. 0.

A general survey of the laws and processes of consumption, production, exchange, and distribution of wealth, combined with a study of land, labor, capital, money, rent, wages, and interest.

Professor Clark.

403-4. ECONOMICS FOR ENGINEERING STUDENTS.—Sem. 1 and 2.

Rec. 2. Lab. 0.

The first semester's work will be identical with Course 401. The second semester's work will deal more particularly with problems pertaining to the field of engineering, as for example, business organization, corporation finance, transportation, labor problems, and industrial management.

Professor Clark.

405. BUSINESS LAW.—Sem. 1.

Rec. 2. Lab. 0.

A practical study of business law and practices. Contracts, sales, bills, notes, agency, partnership, corporation insurance, common carriers.

Professor Clark.

406. AMERICAN ECONOMIC AND SOCIAL PROBLEMS.—Sem. 2.

Rec. 2. Lab. 2.

This course will treat of some of the more fundamental problems confronting the American Nation today, such as education, crime, poverty, immigration and the tariff.

Professor Clark.

408. AGRICULTURAL ECONOMICS.—Sem. 2.

Rec. 3. Lab. 0.

See Education 304.

ENGLISH

Professor Rutland

Professor Taylor

Assistant Professor Saidla

Instructors, Misses Hollifield and Cooper

Assistants Walker, Holstun, Anderson, and Hardeman

101-2. COMPOSITION. —Sem. 1 and 2.

Rec. 3.

A collegiate course in writing.

201-2. SURVEY OF ENGLISH LITERATURE.—Sem. 1 and 2.

Rec. 3.

An introductory course to English literature.

203. EXPOSITION.—Sem. 2.

Rec. 3.

Preparation of scientific and professional papers.

204. BUSINESS WRITING.—Sem. 2.

Rec. 3.

Practice in business correspondence, report making, etc.

205-6. PUBLIC SPEAKING.—Sem. 1 and 2. Rec. 3.

A course in the writing and delivery of orations, arguments, business talks, extemporaneous speeches, etc.

301-2. CONTEMPORARY ENGLISH WRITERS.—Sem. 1 and 2. Rec. 3.

An appreciative study of the literature of our own time.

Professor Rutland.

303-4. AGRICULTURAL JOURNALISM.—Sem. 1 and 2. Rec. 3.

A course in technical writing for agricultural students who expect to go into journalism, demonstration work, or teaching.

Assistant Professor Saidla.

305-6. ADVANCED ENGINEERING WRITING.—Sem. 1 and 2. Rec. 3.

An advanced course for engineering students in the preparation of scientific papers, reports, contributions to technical periodicals, etc.

Professor Taylor.

401. JOURNALISM.—Sem. 1. Rec. 2.

The gathering and writing of news.

Professor Rutland.

402. JOURNALISM.—Sem. 2. Rec. 2.

The writing of editorials and special articles.

Professor Rutland.

403. SHAKESPEARE.—Sem. 1. Rec. 2.

A study of Shakespeare's principal plays.

Assistant Professor Saidla.

404. DRAMA SINCE SHAKESPEARE.—Sem. 2. Rec. 2.

Special emphasis will be given to the recent dramatic renaissance.

Assistant Professor Saidla.

405-6. THE ENGLISH BIBLE.—Sem. 1 and 2. Rec. 2.

A study of the Bible as literature with some attention to the origin and history of the books and to the texts.

Assistant Professor Saidla.

407-8. CONTEMPORARY EUROPEAN WRITERS.—Sem. 1 and 2. Rec. 2.

This course, with course 301-302, attempts a survey of contemporary writers of Europe and America. Only those French, German, Scandinavian, Russian, and Italian books which are available in translation will be assigned for reading.

Professor Rutland.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education and who are not prepared to take the regular courses described above.

Instructors Misses Hollifield and Cooper.

HISTORY AND LATIN

Professor Petrie
Professor Clark
Instructor Reynolds
Assistants Barker and Reid

HISTORY

101-2. **HISTORY OF THE UNITED STATES.**—Sem. 1 and 2. Rec. 2. Lab. 0.

This course covers the leading points in the Industrial and Constitutional history of our country from 1765 to 1921, emphasizing especially the recent period.

Professor Petrie; Instructor Reynolds; Assistants Barker and Reid.

201. **RECENT HISTORY OF EUROPE.**—Sem. 1. Rec. 1. Lab. 0.

The course touches the main points in the history of Europe from the Franco-Prussian War through the recent World War.

Professor Petrie; Instructor Reynolds; Assistants Barker and Reid.

202. **PRESENT EUROPEAN PROBLEMS.**—Sem. 2. Rec. 1. Lab. 0.

A study of problems arising from the World War and the Peace Conference.

Instructor Reynolds.

203-4. **HISTORICAL LABORATORY.**—Sem. 1 and 2. Rec. 0. Lab. 6.

Modern laboratory methods are here applied to the study of questions in the history of the United States since 1865.

Professor Petrie; Instructor Reynolds.

301-2. **CIVICS.**—Sem. 1 and 2. Rec. 3. Lab. 0.

This is an advanced course in the nature of our government and its practical working.

Professor Clark.

303-4. **HISTORICAL LABORATORY.**—Sem. 1 and 2. Rec. 0. Lab. 6.

Laboratory work is offered in United States history from 1865 to 1921.

Professor Petrie; Instructor Reynolds.

305-6. **CURRENT EVENTS.**—Sem. 1 and 2. Rec. 1. Lab. 0.

A study of events in the world today based on current periodicals.

Professor Petrie.

401-2. **GOVERNMENTS OF EUROPE.**—Sem. 1 and 2. Rec. 3. Lab. 0.

A comparative study of the governments of the leading countries of Europe both before and after the recent World War.

Instructor Reynolds.

403-4. **HISTORICAL LABORATORY.**—Sem. 1 and 2. Rec. 0. Lab. 6.

This is a continuation of the laboratory course in the junior class. The problems are taken from the same period of United States History. Especial emphasis is laid on finding and using new material.

Professor Petrie; Instructor Reynolds.

405-6. **LATIN AMERICA.**—Sem. 1 and 2. Rec. 3. Lab. 0.

This course is given in three sections of one hour each. These sections may be taken separately or together. The first covers the geography and commerce of the Latin American countries; the second, their history; and the third, their institutions.

Professor Clark.

- 501-2. ECONOMIC HISTORY OF THE UNITED STATES. (Graduate Course).—
Sem. 1 and 2. Rec. 3. Lab. 6.

In this course the work is largely research in the economic history of the United States. In addition to this, laboratory work is required.

Professors Petrie and Clark; Instructor Reynolds.

LATIN

Latin is not required in any course but is offered to those who wish it.

- 101-2. CICERO'S ESSAYS.—Sem. 1 and 2. Rec. 3. Lab. 0.

Especial emphasis is placed on the structure of the Latin language and its relation to the English language.

Instructor Reynolds.

103. PHARMACY LATIN.—Sem. 1. Rec. 3. Lab. 0.

A technical course in Latin as used for prescription writing.

Instructor Reynolds.

- 201-2. LIVY.—Sem. 1 and 2. Rec. 3. Lab. 0.

Especial attention is given to Latin composition.

Instructor Reynolds.

- 301-2. LIVY. (Continued).—Sem. 1 and 2. Rec. 3. Lab. 0.

The course includes also a survey of Roman history and institutions.

Instructor Reynolds.

- 401-2. HORACE AND LATIN LITERATURE.—Sem. 1 and 2. Rec. 3. Lab. 0.

Professor Petrie.

MATHEMATICS

Professor Crenshaw

Professors Turner, Killebrew, Shi

Instructors Pitts, Hanna, Miss Hollifield

Assistants Reed and Acker

The courses of instruction offered in this department are designed to give the student a working knowledge of mathematics, so that he may be able to solve any of the ordinary problems that arise in the study and pursuit of the engineering and scientific professions. At the same time, however, the principles of pure mathematics are in no wise neglected and every effort is made to give the student that training in mental discipline for which the study of mathematics is well fitted.

In calculus, particularly, a large part of the time is devoted to the solution of practical problems.

The courses offered in the different classes in this department are as follows:

For all courses other than engineering and architecture.

101. ADVANCED ALGEBRA.—Sem. 1. Rec. 3.

102. PLANE TRIGONOMETRY.—Sem. 2. Rec. 3.

For courses in engineering and architecture.

103. PLANE TRIGONOMETRY.—Sem. 1.	Rec. 3.
104. ANALYTIC GEOMETRY.—Sem. 2.	Rec. 3.
105. COLLEGE ALGEBRA. PART I.—Sem. 1.	Rec. 2.
106. COLLEGE ALGEBRA. PART II.—Sem. 2.	Rec. 2.
201. DIFFERENTIAL CALCULUS.—Sem. 1.	Rec. 5.
202. INTEGRAL CALCULUS.—Sem. 2.	Rec. 5.
301. INTEGRAL CALCULUS.—Sem. 1.	Rec. 3.
401. DIFFERENTIAL EQUATIONS, PART I.—Sem. 1.	Rec. 3.
402. DIFFERENTIAL EQUATIONS, PART II.—Sem. 2.	Rec. 3.
403. METHODS OF TEACHING MATHEMATICS.—Sem. 1.	Rec. 2.

This course is designed for teachers of elementary mathematics, or for those who expect to make this their profession.

404. PROJECTIVE GEOMETRY.—Sem. 2.	Rec. 2.
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This course, which aims to present the elements of the subject, will be offered to students who have completed courses 201 and 202.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the Institution by the Federal Board for Vocational Education and who are not prepared to take the regular courses described above.

Instructors Hanna and Miss Hollifield.

MILITARY SCIENCE AND TACTICS

*Major Spalding
Captains Erler, Fortier, Clay*

The military department is maintained under the Federal Law of July 22, 1861, and the Act of Congress, June 3, 1916. Under the latter law there have been organized units in field artillery, infantry, and engineers of the Senior Division of the Reserve Officers' Training Corps, and they are supervised by the War Department.

An officer of the Regular Army is detailed as Professor of Military Science and Tactics. By the appointment of the college authorities he is the Commandant of Cadets. He is assisted by three commissioned officers and a number of non-commissioned officers detailed from the army.

Rifles and equipment, various types of artillery, motor vehicles, and fifty horses are provided by the Government. A uniform is furnished by the Government for issue, by the college, to each member of the Reserve Officers' Training Corps. The uniform remains the property of the Government, and is for the use of the student only while he remains a member of the training corps.

The courses of instruction are graded courses, covering four years. When any member of the Senior Division of the Reserve

Officers' Training Corps has completed two academic years in that division, and has been selected for further training by the president of the institution and by the professor of military science and tactics, and has agreed in writing to continue in the Reserve Officers' Training Corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, and to pursue the prescribed course in camp training, he may be furnished by the United States with commutation of subsistence at such rate as may be fixed by the Secretary of War, during the remainder of his service in the Reserve Officers' Training Corps. At present this amounts to fifteen dollars per month.

The course in camp training consists of one summer camp, not to exceed six weeks in length. Transportation to and from the camp and subsistence during such travel and while at camp is furnished at the expense of the Government.

The object of the military training is to educate college men in the duties of a subaltern officer in the army. No obligation to perform military service after graduation is incurred by the student. Upon graduation from the military department the student may make application for appointment as a second lieutenant in the Officers' Reserve Corps.

The students are organized as a battalion of infantry, a battalion of field artillery, and a company of engineers. The officers are selected as far as practicable from among the seniors and juniors who are pursuing the Advanced Course of the Reserve Officers' Training Corps. A student band furnishes music for parades and other ceremonies and on special occasions. Members of the Reserve Officers' Training Corps are authorized to serve in the band so long as their regular course of instruction is not interfered with.

FIELD ARTILLERY UNIT

101-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Construction and design of guns and howitzers; Ammunition and fuses; Fire control instruments; Telephone and radio; Gun squad drill; Pistol practice.

Major Spalding and Captain Fortier.

201. Sem. 1.

Rec. 1. Lab. 2.

Motors and motor transportation; Theory and design of gas engines, motor vehicles and tractors; Practical instruction in driving motor vehicles.

Major Spalding and Captain Fortier.

202. Sem. 2.

Rec. 1. Lab. 2.

Topography; Field Artillery reconnaissance; Duties of Battery Commanders detail and the service of information.

Major Spalding and Captain Fortier.

During both terms the student may volunteer for special

instruction in hippology, horsemanship and equitation. The unit has fifty horses for this purpose.

Major Spalding and Captain Fortier.

301-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Field Artillery, Gunnery and Firing; Ballistics, accuracy of fire, preparation of firing data, observation and effect of fire. The conduct of fire both in open and stabilized warfare is studied on miniature terrains and on the smoke bomb range.

Hippology and practical instruction in equitation and horsemanship is given. The student exercises the command of a non-commissioned officer at mounted and dismounted drills.

Major Spalding and Captain Fortier.

401. Sem. 1.

Rec. 2. Lab. 3.

Minor tactics including organization and tactics of the various arms. Duties of non-commissioned officers in mounted and dismounted drills.

Major Spalding and Captain Fortier.

402.

Military history and policy of the United States including a study of the more important campaigns and battles; Military law.

Major Spalding and Captain Fortier.

INFANTRY UNIT

101-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Principles of organization and administration of a company; Military hygiene, first aid and sanitation; Military courtesy; Physical training; Infantry drill, including close and extended order drill and ceremonies; Infantry weapons, including rifle, bayonet, infantry pack, and accessory weapons; Signal communication; Minor tactics, including patrolling, messages, and reports; Gallery rifle firing.

Captain Erler.

201. Sem. 1.

Rec. 1. Lab. 2.

Theoretical and practical instruction in the principles of leadership; Close and extended order drill, and combat; Infantry weapons and equipment, including the rifle, automatic rifle, machine gun, and the infantry pack; Minor tactics, including patrolling, advance and rear guards, and outpost problems.

Captain Erler.

202. Sem. 2.

Rec. 1. Lab. 2.

Sketching, including instruction necessary to make road, outpost, and position sketches; Map readings; Physical training; Gallery rifle firing; instruction in the duties of non-commissioned officers in the infantry drill.

Captain Erler.

301-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Field engineering, including principles and methods of field engineering in all types of trenches, obstacles concealment, and camouflaging; Construction of models of all types of trenches and obstacles; Instruction in the duties of non-commissioned officers in the infantry drill, including the school of the battalion; Infantry weapons, including the pistol, hand and rifle grades, trench mortars, and one pounder gun; Minor tactics, including combat reconnaissance, orders development, advancing the attack, the fire attack, the assault, position warfare, ap-

proach marches, organization of the ground, the company in support, in reverse, acting alone, machine guns, one pounder, and light mortar.

Captain Erler.

401-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Musketry, including range and estimation, target designation, fire distribution, communication signals and transmission of firing data, use of cover, fire discipline, application of fire, and exercise with landscape targets including firing on the auxiliary target. Minor tactics, including war maneuvers and problems and illustrative work on map and sand table; War game problems and tactical walks; Military history including important campaigns and battles in the history of the United States; Military laws and the rules of land warfare.

Major Spalding and Captain Erler.

ENGINEER UNIT

101-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Organization, courtesy drill, military fundamentals, rifle firing, physical training, tactics.

Captain Clay.

201-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Organization, military fundamentals, drill, tactics, roads, railroads, bridges, sketching, engineer operations, rifle firing, fortifications, general construction.

Captain Clay.

301-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Military fundamentals, mechanical equipment and ordnance, machine guns, auto rifles, stokes mortars, engineer organization, fortifications, general construction, photography.

Captain Clay.

401-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Military fundamentals, drills, roads, railroads, bridges, maps, and map making, fortifications, engineer operations, river and harbor work, military law and history policy.

Major Spalding and Captain Clay.

MODERN LANGUAGES

Professor Atkinson

Assistant Professor Moore.

FRENCH

No college credit is given for high school work in modern languages. Those who have completed two years of high school work in any language will take the courses in that language.

301-2A. FRENCH.—Sem. 1 and 2.

Rec. 3.

This course is for those students who have had not more than one year of French in preparatory schools and for those who have never studied the language. It will consist of the acquisition of a good pronunciation, essentials of grammar, facility in understanding and speaking simple idiomatic sentences, and simple prose composition.

301-2B. FRENCH.—Sem. 1 and 2.

Rec. 3.

This course is designed for those who have successfully completed two years of preparatory school work in French, or

who have finished course 301-2A. It will consist of a thorough review of French grammar, and reading from well selected texts of modern authors. Oral work will be continued.

401-2. FRENCH.—Sem. 1 and 2.

Rec. 3.

This course will consist of reading in class from representative authors, collateral reading in scientific and other periodicals, written reports on outside reading, conversation, and continuous review of grammar.

Prerequisite, 301-2B.

ITALIAN

If there is sufficient demand for Italian, a course will be given corresponding to French 301-2 A.

SPANISH

301-2A. SPANISH.—Sem. 1 and 2.

Rec. 3.

This course is for students who have not had more than one year of Spanish in preparatory school, and for those who have never studied the language. It will consist of the acquisition of a good pronunciation, grammar (including the forms and some of the uses of the subjunctive), facility in understanding and speaking simple idiomatic sentences, and prose composition.

Professor Atkinson, Assistant Professor Moore.

301-2B. SPANISH.—Sem. 1 and 2.

Rec. 3.

This course is designed for those who have successfully completed two years of preparatory work in Spanish, or who have finished course 301-2A. It will consist of a thorough review of Spanish grammar, and reading from well selected texts of modern authors. Oral work will be continued.

401-2. SPANISH.—Sem. 1 and 2.

Rec. 3.

This course will consist of reading in class from representative authors, collateral reading in scientific and other periodicals, written reports on outside reading, conversation, continuous review of grammar and Spanish correspondence.

Prerequisite 301-2B.

GERMAN

301-2A. GERMAN.—Sem. 1 and 2.

Rec. 3.

This course is for those students who have not had more than one year of German in preparatory school, and for those who have never studied the language. It will consist of the acquisition of a good pronunciation, essentials of grammar, facility of understanding and speaking simple, idiomatic sentences, and simple prose composition.

Assistant Professor Moore.

301-2B. GERMAN.—Sem. 1 and 2.

Rec. 3.

This course is designed for those who have successfully completed two years of preparatory work in German, or who have finished course 301-2A. It will consist of a thorough review of German grammar, and reading from well selected texts of modern authors.

Assistant Professor Moore.

401-2. GERMAN.—Sem. 1 and 2.

Rec. 3.

This course will consist of reading in class from representative authors, collateral reading in scientific and other periodicals, written reports on outside reading, conversation and continuous review of grammar.

Assistant Professor Moore.

MUSIC

Professor Thomas
Instructor Bidez

201-2. COLLEGE BAND.—Sem. 1 and 2.

Rec. 0. Lab. 4.

Competent players of band instruments are transferred to the College Band upon satisfactory completion of a try-out as given by the Bandmaster. In the second semester, a second band is organized for first year students who wish to learn band instruments. Instruction free. Instruments furnished by the College.

Instructor Bidez.

303-4. COLLEGE ORCHESTRA.—Sem. 1 and 2.

Rec. 0. Lab. 4-6.

The College Orchestra affords to qualified students an excellent opportunity for study of orchestral compositions. A second orchestra is maintained to prepare musicians for the future first orchestra. A number of selected musicians receive remuneration for regular college work.

Instructor Bidez.

401-2. COLLEGE GLEE CLUB.—Sem. 1 and 2.

Rec. 0. Lab. 4-6.

The Auburn Glee Club provides the opportunity for those qualified to study and learn the popular and more serious forms of choral compositions. Students are admitted through a try-out given by the Director. Exacting regular attendance is required of all who are selected to make trips with the club.

Instructor Bidez.

305. THEORY OF MUSIC.—Sem. 1.

Rec. 1. Lab. 4.

A study of the rudiments of music; notation, value of notes and rests; intervals, inverted and en-harmonic; forms of the diatonic scale; major and minor scales, chords; tempo, time and rhythm; syncopation, abbreviations, and embellishments.

Instructor Bidez.

306. MUSICAL PERFORMANCE.—Sem. 2.

Rec. 1. Lab. 4-6.

Composition, motif, structure, phrase, theme; imitation, fuge, canon, counterpoint; expression, arrangement of the score; instrumentation, accompaniment; acoustics.

Instructor Bidez.

407. HISTORY OF MUSIC.—Sem. 1.

Rec. 1. Lab. 4.

The progress of musical development from the primitive period to the present. The development of instruments, their compass and pitch. Development of part-songs; modern voice placing, compass, and color.

Instructor Bidez.

408. MUSIC APPRECIATION.—Sem. 2.

Rec. 1. Lab. 4-6.

Musical compositions, overture, symphony, sonata, concerto, fantastic, opera, ballad, aria, recitative, cantata, oratoria; The influence of art upon music, and of music upon other fine arts.

Professor Thomas.

PHYSICS

Professor Wooten

Assistants Bailey, Gottlieb, and Reed

201. GENERAL PHYSICS.—Sem. 1.

Rec. 3. Lab. 0.

Mechanics and Heat. Lectures and demonstration, weekly problem work. For students in engineering. Prerequisite, Mathematics 102 or 103.

Professor Wooten.

202. GENERAL PHYSICS.—Sem. 2.

Rec. 3.

Sound, light and electricity. Lectures and demonstration, weekly problem work. For students in engineering. Prerequisite, Physics 201.

Professor Wooten

203. GENERAL PHYSICS.—Sem. 1.

Rec. 3.

Mechanics and Heat. Lectures and demonstration, weekly problem work. For non-engineering students. Prerequisite, Mathematics 102.

Professor Wooten.

204. GENERAL PHYSICS.—Sem. 2.

Rec. 3.

Sound, light and electricity. Lectures and demonstration, weekly problem work. For non-engineering students. Prerequisite, Physics 203.

Professor Wooten.

205-6. PHYSICAL LABORATORY.—Sem. 1 and 2.

Rec. 2.

Experiments in subjects treated in Physics 202. Prerequisite, Mathematics 102 or 103.

Professor Wooten and Assistant.

401. ADVANCED ELECTRICITY AND MAGNETISM.—Sem. 1.

Rec. 2.

Prerequisites, Mathematics 202 or 301 and Physics 202 and 206.

Professor Wooten and Assistant.

402. ADVANCED ELECTRICITY AND MAGNETISM.—Sem. 2.

Rec. 2.

Prerequisites, Physics 401.

Professor Wooten.

PHYSICAL TRAINING AND ATHLETICS

*Professor Donahue**Professor Hutsell*

The Alumni Gymnasium offers improved facilities for complete physical training in outdoor and indoor work. The college authorities attach due importance to the value of robust physical health. The aim of the athletic authorities is to develop, not only a set of highly trained athletic experts in particular fields of sports, but to interest each individual student in the care and development of the body through some form of athletic activity. While, therefore, every effort is made to maintain a high standard of athletic efficiency in various representative teams, every member of the student body is encouraged to gratify his love for games and sports.

The football field, named in honor of the surgeon, Dr. J. H. Drake, is situated on the experiment station grounds near the gymnasium. The old field on the campus has been graded and put in such condition that the baseball and track teams will have facilities second to none in the South.

101-2. PHYSICAL TRAINING.—Sem. 1 and 2.

Rec. 0. Lab. 2.

Floor tactics, calisthenics, gymnastics, swimming, outdoor and indoor games and athletics. Required of all first-year students. Elective for sophomores, juniors and seniors.

Professor Hutsell.

103-4. CORRECTIVE GYMNASTICS.—Sem. 1 and 2.

Rec. 0. Lab. 3.

Work adapted to those for whom the regular course in physical training is too strenuous.

Professor Hutsell.

301-2. GENERAL COURSE.—Sem. 1 and 2.

Rec. 2. Lab. 3.

History and principles of physical education. Instruction and practice teaching, class drills, and calisthenic exercises. Hygiene and emergencies. Prerequisite: 101-102.

Professor Hutsell.

401-2. THEORY AND PRACTICE OF COACHING.—Sem. 1 and 2.

Rec. 2. Lab. 3.

The theory of coaching football, basket ball, base ball, track and field, swimming and boxing will be taken up in connection with actual completion and demonstrations. Training methods, rules, officials, diets, massage, hygiene, and business management. Prerequisite: 101-102.

Professors Donahue and Hutsell.

A physical examination of each student should be made by the medical examiner at the beginning of each semester, and these records kept on file in the athletic office.

DEPARTMENT OF HOME ECONOMICS

HOME ECONOMICS

101. **ELEMENTARY CLOTHING STUDY.**—Sem. 1. Rec. 2. Lab. 8.

A study of the selection, buying, care, construction of clothing, textile fibers in relation to selection and purchase, and the personal clothing budget. The construction work presupposes a knowledge of fundamental sewing principles. Prerequisite: One year of high school clothing or equivalent. Parallel Home Economics 103.

102. **ELEMENTARY FOOD STUDY.**—Sem. 2. Rec. 2. Lab. 8.

A study of the selection, buying, preparation and serving of food, and kitchen equipment. Food principles, nutritive values and skill in manipulation will receive special attention. All foods will be studied in relation to their place in a meal. The cooking work presupposes experience and skill in cooking. Prerequisite: One year of high school foods or equivalent, one semester Chemistry 101, Zoology 101.

103-4. **APPLIED ARTS.**—Sem. 1 and 2. Rec. 0. Lab. 8.

A study of line, color and design applied to the home and to dress. Parallel Home Economics 101.

201. **ADVANCED CLOTHING.**—Sem. 1. Rec. 1. Lab. 9.

A study of clothing problems including the family clothing budget and buying ready made clothes and home millinery. The construction problems are worked out in connection with Home Economics 203, costume design. Both courses will be taught by the same teachers. Prerequisite: Home Economics 101, 103. Parallel Home Economics 203.

202. **ADVANCED.**—Sem. 2. Rec. 1. Lab. 9.

A study of foods including the food budget, balanced meals and family food problems. This course will be worked out in connection with Home Economics 204, the course in nutrition. Prerequisites: Home Economics 102, Chemistry 101, Zoology 101, Physiology 101, Sophomore Chemistry. Parallel Bacteriology and Home Economics 204.

203. **COSTUME DESIGN.**—Sem. 1. Rec. 1. Lab. 6.

A study of the human figure, lines, color and design for different types. Designs made in pencil, water color and fabrics. Home Economics 201 will work out designs in this course. 201-3 will be taught by the same teacher. Prerequisites: Home Economics 101, 103.

204. **NUTRITION.**—Sem. 1. Rec. 1. Lab. 3.

A study of the chemistry and physiology of metabolism of human nutrition as applied to the feeding of individuals and groups under conditions of health and those diseases which are chiefly dependent upon dietetic treatment. Prerequisite: Home Economics 102, Chemistry 101, Sophomore Chemistry, Physiology 201. Parallel Bacteriology 201, Home Economics 202.

301. **HOME AND COMMUNITY SANITATION.**—Sem. 1. Rec. 2. Lab. 3.

A study of food, milk and water supply, sewage and refuse disposal, transfer of disease, disinfection, quarantine, rural and urban health conditions. Health laws and administration. Prerequisite: Bacteriology 201.

302. HOME CARE OF THE SICK, AND FIRST AID.—Sem. 2. Rec. 1. Lab. 6.

Care of sick room, observation and care of patient, communicable diseases, transmission, prevention, first aid, personal hygiene. Prerequisite: Physiology 201.

305-6. THE HOUSE.—Sem. 1 and 2.

Rec. 1. Lab. 6.

A study of planning, remodeling, furnishing and care of the house. Sites, floor plans, materials, lighting, heating, ventilating, plumbing, walls, floors, furniture, equipment, care. Prerequisite: Home Economics 103-4. Parellel Bacteriology 201.

401-2. METHODS OF TEACHING HOME ECONOMICS.—Sem. 1 and 2.

Rec. 2. Lab. 0.

Practice Teaching, curricula, equipment, methods of teaching, directed observation. Prerequisite: Education 401-2, Home Economics 201, 202, 305.

403. CHILD WELFARE.—Sem. 2.

Rec. 2. Lab. 3.

A study of child psychology, and physical, moral and mental development of children.

405-6. HOME ADMINISTRATION.—Sem. 1 and 2.

Rec. 2. Lab. 3.

A study of managerial problems of finance including budget, savings, work schedule. Laboratory work of this course is experience in managing a home, either a practice house or other homes. Prerequisite: Home Economics 201, 202, 305.

HOME DEMONSTRATION WORK

Home Demonstration Work is carried on in all of the states as a department of the Extension Service of the Colleges of Agriculture, co-operating with the United States Department of Agriculture.

This is a permanent and fixed part of the educational system of the several states, and there is a very great demand for well trained women to fill the many positions of leadership.

When the organization is completed, there will be a trained woman leader in each of the 3,000 or more counties in the United States and, in addition to this, a large force of technical specialists, district and state supervisors. At present the work is in its infancy.

Women, desiring to enter a profession where good salaries will be paid, and in which there are unlimited possibilities for service, should register for the course in Home Demonstration Work.

202. HOME LAUNDERING.—Sem. 2.

Rec. 1. Lab. 1.

This includes stain removal, setting colors, washing cottons, linens, woolens, silk; ironing; dry-cleaning; dyeing; types of washing machines; plans for well equipped home laundries. Prerequisite: Chemistry 101-2, 103-4, Home Economics 101.

301-2. FOOD PRESERVATION.—Sem. 1 and 2.

Rec. 1. Lab. 2.

Fruits, vegetables, meats: canning, curing, drying, brining, pickling, vinegar-making, jelly-making, fruit juice making, preserving, fancy packing. Prerequisite: Chemistry 101-2, 201, bacteriology, Home Economics 102.

303. POULTRY CLUB PRACTICE.—Sem. 1.

Rec. 0. Lab. 2.

This course gives the student practice in culling, feeding for egg production, packing and grading eggs, organization of egg circles, marketing, keeping records, preparation for poultry shows and fairs; poultry judging, and other phases of poultry club work.

305. ORGANIZATION.—Sem. 1.

Rec. 1. Lab. 0.

Origin, development, and results of home demonstration work in the South, with special reference to the work in Alabama. Girls' and Women's Home Demonstration Clubs; individual demonstrations, community organizations; exhibits, fairs. Prerequisite: Home Demonstration 301-2.

307. DEMONSTRATION METHODS.—Sem. 1.

Rec. 1. Lab. 2.

In this course students will be trained to give demonstrations in cookery, food preservation, garment-making, butter-making, laundering, and other subjects.

Prerequisite: Freshman, sophomore, home economics; dairying; Parellel: Poultry and Junior home economics; home demonstration 301-2, 303, 305.

402. FIELD WORK.—Sem. 2.

Rec. 1. Lab. 2.

In this course students will organize girls' and women's home demonstration clubs in Lee County, and give public lectures and demonstrations.

Prerequisite: Home demonstration 202, 301-2, 303, 305, 307.

403-4. ADMINISTRATION.—Sem. 2.

Rec. 2. Lab. 0.

In this course students will become familiar with the organization of the Extension Service, and its relation to all forces working for the improvement of rural conditions.

Students will be required to work two hours a week in the extension offices in order that they may become familiar with the office duties of a home demonstration agent.

Prerequisite: Home demonstration 305, 402.

COLLEGE OF AGRICULTURE

AGRONOMY

Professor Duggar
Professor Funchess
Assistant Professor Burleson
Instructor Tidmore

101. CORN PRODUCTION.—Sem. 1. Rec. 1. Lab. 2.

A study of the fundamental factors involved in corn production.

Professor Funchess and Assistant Professor Burleson.

202. SMALL GRAINS AND WEEDS.—Sem. 2. Rec. 2. Lab. 2.

The first half semester is devoted to the small grains; the second half, to common weeds.

Assistant Professor Burleson.

302. FORAGE CROPS.—Sem. 2. Rec. 2. Lab. 2.

This course deals with both grass and legume forage crops. The crops are considered from the standpoint of (a) pasture crops; (b) as hay crops; and (c) as soil improving crops.

Professor Funchess and Assistant Professor Burleson.

304. SOILS.—Sem. 2. Rec. 2. Lab. 2.

Origin and classification of soils; soil areas and types; soil physics.

Professor Funchess and Assistant Professor Burleson.

401. FERTILIZERS AND SOIL FERTILITY.—Sem. 1. Rec. 2. Lab. 3.

Fertilizers as related to crop production and to permanent soil fertility. Fundamental principles of soil fertility. A part of the laboratory work may be done in connection with soils from the home farm.

Prerequisite: Course 304 and quantitative chemistry.

Professor Funchess and Assistant Professor Burleson.

402. SPECIAL SOIL PROBLEMS.—Sem. 2. Rec. 1. Lab. 2.

This course is planned to serve those students who desire additional work in soil fertility. Lectures, assigned readings, conferences and laboratory work.

Prerequisite: Course 401.

Professor Funchess.

403. FIBER AND SIRUP CROPS.—Sem. 1. Rec. 2. Lab. 2.

In this course, most of the time will be devoted to cotton. A limited amount of time will be devoted to other fiber crops, and to sirup crops.

Assistant Professor Burleson.

404. ADVANCED CROP PRODUCTION.—Sem. 2. Rec. 2.

Lectures, conferences and assigned readings.

Prerequisite: Courses 101, 202, 302, and 403.

Professor Funchess and Assistant Professor Burleson.

406. FARM MANAGEMENT.—Sem. 2. Rec. 2. Lab. 2.

A study of the factors involved in profitable farm organization and management. Farm accounts will be considered in connection with the laboratory work.

Professor Funchess and Assistant Professor Burleson.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education and who are not prepared to take the regular courses described above.

Instructor Tidmore.

AGRICULTURAL ENGINEERING

Professor Nichols
Assistant Professor Randolph
Assistant Green

Courses offered in Agricultural Engineering attempt to present to the student (1) The fundamental principles underlying the construction of farm machinery, structures and devices in as simple and clear manner as possible; (2) A knowledge of the equipment on the market, or plans which are available from which he must select; (3) How he can use these devices to increase the efficiency of his farming. The following courses are open to four-year students only.

301. DRAINAGE AND TERRACING.—Sem. 1. Rec. 2. Lab. 3.

The fundamental principles of terracing and drainage with practical applications.

Professor Nichols.

302. FARM MACHINERY.—Sem. 2. Rec. 2. Lab. 3.

A study of the types of field machinery and their use with especial attention to their adaptability to Alabama agriculture.

Professor Nichols.

402. FARM BUILDINGS.—Sem. 2. Rec. 2. Lab. 3.

A study of modern construction with attention to sanitation, heating, lighting, ventilation, farm lighting systems, plumbing, and concrete construction on the farm.

Professor Nichols.

401. FARM MOTORS.—Sem. 1. Rec. 2. Lab. 3.

A study of internal combustion engines, their principles and uses, with especial attention to tractors.

Professor Nichols.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education and who are not prepared to take the regular courses described above.

Assistant Professor Randolph and Assistant Green.

ANIMAL HUSBANDRY

Professor Grimes
Associate Professor Eaton
Assistant Professor Burns
Instructor Lauderdale

101. BREEDS OF LIVE STOCK.—JUDGING.—Sem. 1. Rec. 1. Lab. 2.

A study is made of the origin, history, and characteristics of the more important breeds of beef cattle, light horses, heavy horses, jacks, and mules. Judging consists of scoring and placing animals of the different breeds according to breed standards.

Assistant Professor Burns.

102. BREEDS OF LIVE STOCK.—JUDGING.—Sem. 2. Rec. 1. Lab. 2.

A study is made of the origin, history, and characteristics of the more important breeds of dairy cattle, sheep, and swine. Judging consists of scoring and placing animals of the different breeds according to breed standards.

Assistant Professor Burns.

201. ELEMENTS OF DAIRYING.—Sem. 1. Rec. 1. Lab. 2.

The course consists of a discussion of the fundamental principles of dairying. Lectures on the secretion and composition of milk; the testing of milk and cream for butterfat; the care of milk and cream; construction, operation, and care of cream separators. Laboratory work consists of operation of farm churn, Babcock test, and cream separators.

Associate Professor Eaton.

202. LIVE STOCK JUDGING.—Sem. 1. Rec. 0. Lab. 4.

Prerequisite, A. H. 101-2.

Special attention is given to comparative and group judging of the more important breeds of beef cattle, dairy cattle, sheep, swine, horses, and mules. Students are trained in the oral presentation of reasons with reference to the relative merit of animals.

Associate Professor Eaton.

301. DAIRY CATTLE MANAGEMENT.—Sem. 2. Rec. 1. Lab. 2.

The course consists of a study of the management of the dairy herd under southern conditions; the study of equipment for the dairy farm; development of the dairy herd, dairy farm records; conduct of official tests.

Assistant Professor Eaton.

302. POULTRY.—Sem. 2. Rec. 2. Lab. 0.

In this course lectures are given covering the different types of poultry with relation to their use and value on the farm. Instruction is also given in feeding, managing, housing, and judging poultry.

Associate Professor Eaton

304. HORSE AND MULE MANAGEMENT.—SHEEP PRODUCTION.—Sem. 2.

Rec. 1. Lab. 2.

Prerequisites, A. H. 101, 102, and 202.

(a) *Horse and Mule Management*: (Half semester).

Lectures and laboratory work are given in the care of stallions, mares, and foals; work horses and mules at labor and idle.

(b) *Sheep Production*: (Half semester).

Instruction is given in the handling of pure bred and grade

flocks, considering the market classes and grades, housing and handling under southern conditions.

Assistant Professor Burns.

401. FEEDING.—Sem. 1.

Rec. 3. Lab. 0.

A consideration of the classes of food nutrients, the ordinary and possible function of each in the animal body; digestion, absorption, and assimilation; the extent and nature of the demands for maintenance, growth, fattening, milk, and wool; principles in selection of rations; feedstuffs; feeding standards and compounding rations.

Assistant Professor Burns.

402. FEEDING.—Sem. 2.

Rec. 3. Lab. 0.

This course consists of lectures, supplemented by reference reading, upon the most profitable methods of producing pork, beef, and mutton. The various concentrates and roughages are discussed as to their importance as feeds for horses, mules, and dairy cattle.

Assistant Professor Burns.

403. BEEF CATTLE PRODUCTION.—Sem. 1.

Rec. 2. Lab. 2.

Prerequisites, A. H. 101 and 202.

The raising of beef cattle is discussed in detail, featuring the care and management of the beef herd in production and marketing. Practical work is given in preparing animals for shows and sales.

Professors Grimes and Burns.

404. SWINE PRODUCTION.—Sem. 2.

Rec. 2. Lab. 2.

Prerequisites, A. H. 101-2.

A detailed study of the practical methods and principles involved in the care and management of hogs. A study of the equipment and methods on the best hog farms will be brought out in the lecture work. The laboratory work consists of demonstrations and exercises in the growing and handling of hogs under Alabama conditions.

Professors Grimes and Burns.

405. MILK PRODUCTION.—Sem. 1.

Rec. 0. Lab. 3.

Prerequisite, A. H. 201.

Training in the production of market milk and for work in city milk plants; milk inspection service; transportation, receiving, grading, pasteurizing, bottling, and distribution of milk.

Associate Professor Eaton.

406. DAIRY MANUFACTURING.—Sem. 2.

Rec. 0. Lab. 3.

Prerequisite, A. H. 201.

The course consists of practical laboratory work in the manufacture of creamery butter, ice cream, and cottage cheese. The object of this course is essentially the training of creamery operators.

Associate Professor Eaton.

407. GENETICS.—Sem. 1.

Rec. 2. Lab. 0.

Prerequisite, Botany 201, 202, Zoology 101, 102.

A course in the fundamental principles of heredity, including a study of reduction, fertilization, hybridization, variation, mutation, and other problems having a bearing on practical plant and animal breeding.

Professor Grimes.

408. ANIMAL BREEDING AND HERD BOOK STUDIES.—Sem. 2. Rec. 2. Lab. 0.

Prerequisites, A. H. 101, 102, and 407.

This course includes a study of inbreeding, line breeding, outcrossing, selection, and other problems which confront the

live stock breeder. Training is given in registering animals, tabulating pedigrees, and use of herd book.

Professor Grimes.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education, and who are not prepared to take the regular courses described above.

Instructor Lauderdale.

BOTANY

Professor Gardner

Associate Professor Johnstone

Laboratory Assistants Dowdell and Wadkins

The electives offered in botany are intended to meet the needs of three different groups of students, namely, (1) Those who intend to engage in farming or in farm demonstration work; (2) Those who plan to teach in secondary schools; (3) Those who desire a thorough technical training in botany to fit themselves for plant disease inspection, investigational work in experiment stations, the United States Department of Agriculture, or similar positions, or who desire to obtain college teaching positions.

The electives that will meet these different needs are as follows:

FOR GROUP (1) APPLIED BOTANY

Systematic Botany.

Diseases of Plants, Agricultural Bacteriology, and Plant Physiology.

FOR GROUP (2) TEACHING BOTANY

Plant Physiology, Diseases of Plants.

Systematic Botany, Methods in Botany, and Ecology.

FOR GROUP (3) TECHNICAL BOTANY

The advanced courses in Plant Physiology and Plant Pathology and a thesis on a suitable subject in addition to the courses recommended for teachers.

201. GENERAL BOTANY.—Sem. 1.

Rec. 2. Lab. 3.

Precedes all other courses in botany. This course is designed to furnish a broad general introduction to the fundamental principles of botany, supplying the foundation upon which subsequent courses are built, and at the same time giving to the non-specialist a good acquaintance with those botanical principles which should form a part of his equipment for life. The course is not rigidly morphological, but deals with the anatomy, physiology, natural history and use of plants.

Associate Professor Johnstone and Assistant Wadkins.

202. AGRICULTURAL BOTANY.—Sem. 2.

Rec. 2. Lab. 3.

This course is designed to meet the needs of agricultural students. The evolutionary development and economic importance of the lower groups of plants are treated briefly. Special emphasis is placed on the classification and identification of common flowering plants, the characteristics and eradication of noxious weeds, and the botanical features of crop

plants. The student will be trained not only in the use of the manual for the identification of plants, but also in the ability to recognize species and families at sight.

Prerequisite, General Botany.

Associate Professor Johnstone and Assistant Wadkins.

204. PHARMACEUTICAL BOTANY.—Sem. 2.

Rec. 2. Lab. 3.

It is the aim of this course to acquaint the student with the local medicinal plants, their recognition and classification. Special attention will be given to the characteristics of medicinal plants, the parts used, the drugs obtained, and the characteristics of the families containing these species.

Prerequisite, General Botany.

Associate Professor Johnstone and Assistant Wadkins.

206. VETERINARY BOTANY.—Sem. 2.

Rec. 2. Lab. 3.

This course is to train students in the classification and recognition of poisonous and medicinal plants. The students will be taught to recognize these plants in the field as well as in the laboratory. Special attention will be given to the families represented by important poisonous and medicinal plants.

Prerequisite, General Botany.

Associate Professor Johnstone and Assistant Wadkins.

303. GENERAL BACTERIOLOGY.—Sem. 1.

Rec. 1. Lab. 4.

This course is designed to supply the fundamental facts and important methods of bacteriology and to serve as a foundation for Agricultural Bacteriology and Plant Pathology.

Prerequisite, General Botany.

Professor Gardner and Assistant.

304. AGRICULTURAL BACTERIOLOGY.—Sem. 2.

Rec. 1. Lab. 4.

This course is a study of the bacteriological problems arising in connection with soil fertility, preserving of fruits and vegetables, and the care and manufacture of milk products.

Prerequisite, General Bacteriology.

Professor Gardner and Assistant Dowdell.

306. PLANT PHYSIOLOGY.—Sem. 2.

JR. OR SR. Rec. 2. Lab. 4.

A study of the various phases of the metabolism of plants such as utilization of raw materials, the manufacture, digestion and assimilation of carbohydrates, fats and proteins, respiration and excretion of waste products.

Prerequisite, General Botany.

Professor Gardner and Assistant Dowdell.

307. SYSTEMATIC BOTANY.—Sem. 1.

Rec. 1. Lab. 3.

This is an advanced course dealing with medicinal plants, poisonous plants, weeds, and wild forage plants. The laboratory and field work will be to a considerable extent adapted to the needs of the student.

Professor Gardner and Associate Professor Johnstone

401. ADVANCED PLANT PHYSIOLOGY.—Sem. 1.

Rec. 1. Lab. 3.

This course deals with such phases of plant physiology as the water requirements, absorption, rise of sap, growth, movement, germination, pollination, and reproduction of plants.

Prerequisite, General Botany.

Professor Gardner.

409. DISEASES OF PLANTS.—Sem. 1.

Rec. 2. Lab. 3.

A study of the important diseases of field crops, fruits, and vegetables, with special attention to symptoms, effects on the plants, and methods of control. A collection of economic plant diseases will be required.

Prerequisite, General Botany.

Professor Gardner.

410. PLANT PATHOLOGY.—Sem. 2.

Rec. 2. Lab. 3.

A systematic study of plant diseases, dealing with the diagnosis of diseased material, the life history and classification of the causal organism, and pathological methods.

Prerequisite, General Botany.

Professor Gardner.

411. METHODS IN BOTANY.—Sem. 1.

Rec. 1. Lab. 3.

A short course intended to familiarize students with methods for preparing microscopic slides and other materials for teaching and advanced work in botany.

Professor Gardner.

414. ECOLOGY.—Sem. 2.

Rec. 2. Lab. 3.

A course in field botany dealing with the distribution and association of plants in relation to their environment. Students will be expected to take field trips at the discretion of the instructor.

Professor Gardner.

425. THESIS

After a month spent in reading under the direction of the professor of botany with a view to the selection of a subject the student will carry out a series of experiments on some problem in morphology, physiology or bacteriology. In addition to original experiments the student will review the literature dealing with his chosen topic, and make a complete and satisfactory report. It is hoped that the results of this work will be worthy of publication.

CHEMISTRY

Professor Ross.

Professors Hare and Miller.

Associate Professor Powell.

Assistant Professors Martin, Marsh and Basore

Instructors Pollard and Massengale.

Assistant Pilcher.

Instruction in this department embraces the courses of lectures and systematic laboratory work described in the pages immediately following. The lecture and laboratory work required of each class is set out in detail under the section devoted to that class. Each student on entering the chemical laboratory is furnished with a work table, a set of re-agent bottles and the common re-agents and apparatus required in the course to be pursued.

At the close of the session he will be credited with such articles as may be returned in good order, the value of those which have been injured or destroyed being deducted from his contingent fee.

101-2. GENERAL CHEMISTRY.—Sem. 1 and 2.

Rec. 3.

Lectures in this course embrace a discussion of the fundamental theories and principles of chemistry in connection with the history, preparation and properties of the chief non-metallic and metallic elements and their compounds, some attention being also given to the more important applications of chemistry to the arts and manufactures. Some important classes of organic compounds are also discussed briefly.

103-4. INORGANIC CHEMISTRY.—Sem. 1 and 2.

Lab. 2

This course embraces a series of experiments illustrative of important phases of the work covered by courses 101-102. Some introductory work in qualitative analysis is given in the latter part of the course.

105. INORGANIC CHEMISTRY.—Sem. 1.

Lab. 1.

A course embracing the preparation of a number of the non-metallic elements and some of the more important inorganic compounds, together with some introductory work in qualitative analysis.

106. QUALITATIVE ANALYSIS.—Sem. 2.

Lab. 6.

This course includes a study of the methods of the qualitative separation and detection of the more important bases and acids, the principles and theories underlying these methods, and the practical application of these processes in the laboratory.

201. ORGANIC CHEMISTRY.—Sem. 1.

Rec. 3. Lab. 0.

For students in Agriculture. This course, though somewhat more condensed, is similar to 303-4 with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins with reference to their functions in the life processes of plants and animals.

202. AGRICULTURAL CHEMISTRY.—Sem. 2.

Rec. 3. Lab. 0.

Lectures on chemistry in its application to agriculture, the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, and the feeding of live stock.

203. ORGANIC CHEMISTRY.—Sem. 1.

Rec. 3. Lab. 6.

Similar to 201 and 303, but arranged for students in veterinary medicine and in the pre-medical course.

204. PHYSIOLOGICAL CHEMISTRY.—Sem. 2.

Rec. 3. Lab. 0.

A brief course for students who have completed course 203.

205-6. QUALITATIVE ANALYSIS.—Sem. 1 and 2.

Rec. 1. Lab. 6.

A course in the theory and practice of qualitative analysis much more comprehensive than course 106.

207. QUALITATIVE ANALYSIS.—Sem. 1.

Rec. 1. Lab. 6.

A course quite similar to course 106.

208. QUANTITATIVE ANALYSIS.—Sem. 2.

Rec. 1. Lab. 6.

A course in the theory and practice of quantitative analysis, with special reference to the needs of students in the courses in agriculture.

210. ORGANIC PREPARATIONS.—Sem. 2. Rec. 1. Lab. 6.

This course follows course 203 and embraces the preparation of a number of important aliphatic and aromatic compounds.

301-2. INDUSTRIAL CHEMISTRY.—Sem. 1 and 2. Rec. 3. Lab. 0.

Lectures in this course include discussion in detail of the processes and chemical principles involved in the more important applications of chemistry in the arts and industries.

303-4. ORGANIC CHEMISTRY.—Sem. 1. Rec. 2.
Sem. 2. Rec. 3.

Instruction in this subject embraces lectures and recitations upon the leading facts and principles of the chemistry of the carbon compounds, and includes a study of the methods of preparation of the more important compounds, their properties, and their structural and stereo-chemical relations.

305. ADVANCED INORGANIC CHEMISTRY.—Sem. 1. Rec. 3.

This course embraces a study of inorganic chemistry with special reference to some of the more important chemical theories.

306. ENGINEERING CHEMISTRY.—Sem. 2. Rec. 2.

Embraces the study of the construction and equipment of the chemical plants devoted to the manufacture of the more important chemical products. Excursions to various chemical and metallurgical plants during the course of the year will aid in familiarizing the student with the practical details of the operation of the leading industries.

307. QUANTITATIVE ANALYSIS.—Sem. 1. Rec. 1. Lab. 8.

This course embraces work in both gravimetric and volumetric analysis, including the analysis of some of the more important ores and minerals.

308. ORGANIC PREPARATIONS AND ORGANIC ANALYSIS.—Sem. 2. Rec. 1.

A more comprehensive course than 210, including some work in organic analysis.

331-2. MINERALOGY.—Sem. 1 and 2. Lab. 4.

A thorough study is made of the crystal systems with the aid of a full set of crystal models and natural crystals. A large number of minerals are studied from the standpoint of their physical characteristics, so that many of the most important minerals can be identified by a few simple tests. The composition and identity of a large number of minerals are determined by means of the blowpipe, flame, hardness and other tests.

341. GENERAL GEOLOGY.—Sem. 1. Rec. 3.

A course covering dynamic geology, structural geology, geomorphology and historical geology in the order named.

342. ECONOMIC GEOLOGY.—Sem. 2. Rec. 2.

Embraces the study of modes of occurrence, distribution, origin and uses of coal, petroleum, limestone, salines, gypsums, fertilizing materials, abrasives, clays, and other important non-metallic minerals and of the more important metallic ores.

401. PHYSICAL CHEMISTRY.—Sem. 1. Rec. 5.

The course of lectures in this subject embraces a discussion of the important theories and laws of physical chemistry.

402. METALLURGY.—Sem. 2.

Rec. 5.

Includes lectures upon the more important metals, such as iron and steel, copper, lead, tin, silver, gold, mercury, zinc, etc., together with a discussion of the physical and chemical properties of the metals and their alloys, the ores and their treatment, and the processes by which the metals are obtained from the ores, with chemical reactions involved.

403. METALLURGICAL LABORATORY.—Sem. 1 and 2.

Lab. 2.

This course includes a study of the construction and operation of some of the more important machinery and appliances employed in ore-dressing, etc.

405. HISTORICAL CHEMISTRY.—Sem. 1.

Rec. 2.

This course embraces an historical study of the growth and progress of chemistry as a science, especial attention being given to a discussion of the progressive development of the fundamental theories of chemistry.

407-8. FOOD CHEMISTRY.—Sem. 1.

Rec. 2.

Sem. 2.

Rec. 1.

A course of study in the chemistry of Foods and Food Products, as regards sources, composition, nutritive properties, etc.

409-410. QUANTITATIVE ANALYSIS.—Sem. 1 and 2.

Rec. 1. Lab. 12.

Embraces analysis of fertilizers, soils, coals, ores, iron, and steel, sugars and sugar products, foods, feeding stuffs, mineral waters, fluxes, slags, etc. The nature of the work is varied somewhat to meet the needs of the individual student.

411-412. QUANTITATIVE ANALYSIS.—Sem. 1.

Rec. 1. Lab. 6.

Sem. 2.

Lab. 3.

This course is quite similar in character and scope to course 307.

414. TOXICOLOGY AND URINALYSIS.—Sem. 2.

Rec. 1. Lab. 3.

A course for students in pharmacy and veterinary medicine.

HORTICULTURE

Professor Starcher

Associate Professor Isbell

Assistant Professor Brown

Instructors Kimbrough and Cook

102. PLANT PROPAGATION.—Sem. 2.

Rec. 1. Lab. 2.

A study of the propagation and growth of plants.

Associate Professor Isbell, Assistant Professor Brown and Instructor Kimbrough.

201-2. ORCHARD MANAGEMENT.—Sem. 1.

Rec. 1. Lab. 2.

Sem. 2.

Rec. 2. Lab. 2.

A practical course in planting, pruning, cultivating, fertilizing, spraying, thinning, harvesting, grading, storing and marketing of the most valuable fruits and nuts grown in the South.

Associate Professor Isbell and Instructor Kimbrough.

301. LANDSCAPE GARDENING.—Sem. 1.

Rec. 2. Lab. 0

Practical landscape gardening as applied to the South.

Instructor Cook.

302. VEGETABLE GARDENING.—Sem. 2.

Rec. 2. Lab. 2.

A study of the origin, growing, storing, use and varieties of different vegetables.

Instructor Kimbrough.

401-2. FRUIT GROWING.—Sem. 1 and 2.

Rec. 3. Lab. 2.

An advanced course along the lines of work given in sophomore and junior classes. Orchard Management and Vegetable Gardening are prerequisites to this course.

Associate Professor Isbell and Instructor Kimbrough.

404. FLORICULTURE.—Sem. 2.

Rec. 1. Lab. 2.

A study and practice of practical floriculture.

Instructor Cook.

403. FORESTRY.—Sem. 1.

Rec. 2. Lab. 0.

A study of the protection and use of forest and forest products.

Instructor Kimbrough.

406. PLANT BREEDING.—Sem. 2.

Rec. 2. Lab. 0.

A study of the improvement of plants, theories and laws of plant breeding with some practical breeding work.

Instructor Kimbrough.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education and who are not prepared to take the regular courses described above.

Assistant Professor Brown

ZOOLOGY AND ENTOMOLOGY

Professor Hinds

Associate Professor Robinson

Assistant Professor -----

*Laboratory Assistants Anderson, Bullock, Malone, Melton,
Miss Spralling, Terry.*

101. INVERTEBRATE ZOOLOGY.—Sem. 1.

Rec. 2. Lab. 2.

A study of the structure, habit, development, ecology, and economic importance of the protozoan and invertebrate animals.

Associate Professor Robinson and -----

102. VERTEBRATE ZOOLOGY.—Sem. 2.

Rec. 2. Lab. 2.

A detailed study of the various classes of vertebrates as to functions, distribution, reproduction, heredity and economic aspects.

Associate Professor Robinson and -----

201-2. COMPARATIVE ANATOMY.—Sem. 1 and 2.

Rec. 2. Lab. 3.

A course dealing with the comparison of the various systems and functions in the different classes of vertebrates.

Prerequisite 102.

Associate Professor Robinson and -----

JUNIOR CLASS**301. GENERAL ENTOMOLOGY.**—Sem. 1.

Rec. 2. Lab. 2.

A study to acquaint the student with the general character-

istics, life histories, and habits of the orders in the class insect.

Prerequisite 101-2.

-----and Associate Professor Robinson

302. ECONOMIC ENTOMOLOGY.—Sem. 2.

Rec. 2. Lab. 2.

A consideration of the principles involved in insect control.

Prerequisite 301.

-----and Associate Professor Robinson.

401. ADVANCED ENTOMOLOGY.—Sem. 1.

Rec. 2. Lab. 2.

Studies in the life histories, control measures, insect control machinery and insecticides.

Prerequisite 301.

-----and Associate Professor Robinson

402. SANITARY ENTOMOLOGY.—Sem. 2.

Rec. 2. Lab. 2.

Consideration of the biological relationships among insects to diseases of domestic animals and man and control measures.

Prerequisite 301.

-----and Associate Professor Robinson.

404. BEE CULTURE.—Sem. 2.

Rec. 2. Lab. 2.

A study of bee behavior, manipulation, bee and honey production and bee diseases.

Prerequisite 301.

-----and Associate Professor Robinson.

SCHOOL OF AGRICULTURAL EDUCATION

Professor Judd
Professors Stivers, Worley, Chesnutt

To meet a general demand for teachers, principals, supervisors, and superintendents for the public schools of Alabama the Board of Trustees established in 1915 a Department of Education. The action of the trustees met an immediate and hearty response from the student body. More than fifty students registered in the department the first year. Since that time the enrollment has steadily increased and this year numbers 263. In the beginning training was specifically for the *secondary* field only.

VOCATIONAL AGRICULTURE

Upon the enactment of the Smith-Hughes law by the Federal Congress, departments of vocational agriculture began to be established in the district agricultural schools, in the county high schools, and in the consolidated rural schools of the State. There was an immediate demand for trained teachers of vocational agriculture and the Alabama Polytechnic Institute was designated by the State Board for Vocational Education to train teachers for this new field.

SCHOOL OF AGRICULTURAL EDUCATION

To meet the growing demand for the professional training of teachers in the field of vocational agriculture, the college enlarged and reorganized its Department of Education into a School of Agricultural Education and instituted a degree course. Three types of students are provided for: Students in academic, including agricultural subjects, who wish to prepare for teaching other than vocational subjects; students who wish to take their bachelor's degree in agricultural education; and students who wish to elect certain courses in education as liberal studies.

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION

Students who wish to apply for the degree of bachelor of science in agricultural education should register in the school of Agricultural Education at the beginning of their freshman year. However, registration may be made as late as the opening of the sophomore or in the junior year.

STATE TEACHER'S CERTIFICATE

Graduates from the college with the degree Bachelor of Science in Agricultural Education and other graduates who

have had the required courses in Education will be entitled to receive upon recommendation of the Dean of the School of Agricultural Education and upon the payment of a fee of two dollars, the Secondary Professional State Teacher's Certificate, good for a period of six years and renewable.

DEMAND FOR TEACHERS

The demand upon the college for teachers is far greater than it can supply. Salaries for beginning teachers range from one thousand to two thousand dollars. The most frequent demand is for teachers of vocational agriculture and for various combinations of the subjects of athletics, manual training, the sciences, and mathematics.

COURSES OF INSTRUCTION

201a. PSYCHOLOGY.—Sem. 1.

Rec. 3.

The aim of this course is to introduce the student to the subject matter and methods of general psychology. Prerequisite to educational psychology for all students in *secondary education*.
Professor Judd.

201b. PSYCHOLOGY.—Sem. 1.

Rec. 3.

A special course in elementary psychology. Prerequisite to educational psychology and to the later professional courses in *agricultural education*.
Professor Judd.

202a. EDUCATIONAL PSYCHOLOGY.—Sem. 2.

Rec. 3.

This course will present first the general problems and scope of educational psychology. It will then consider: the native equipment of human beings; the psychology of learning in general and as applied to school subjects. Prerequisite to the professional courses in *secondary education*.
Professor Judd.

202b. EDUCATIONAL PSYCHOLOGY.—Sem. 2.

Rec. 3.

In its general aspects this course will be the same as 202a but the special application of the laws of learning will be made, as far as practicable, to the teaching of agricultural subject matter. Prerequisite to the professional courses in *agricultural education*.
Professor Judd.

301. HISTORY OF EDUCATION.—Sem. 1.

Rec. 2.

After reviewing the European background this course will trace the development of public education in the United States from the colonial period to the present time. Required of juniors in *secondary education*. Elective for students in *agricultural education*.
Professor Judd.

302. SUPERVISED STUDY.—Sem. 2.

Rec. 2.

The conception of and demand for supervised study; proper conditions and methods of studying; organization of supervised study; special methods of supervising the study of various subjects. Required of juniors in *secondary education*. Elective for students in *agricultural education*.
Professor Judd.

303. INTRODUCTION TO AGRICULTURAL EDUCATION.—Sem. 1.

Rec. 3.

A study of the development of agricultural education in this

country under the influence of private and local initiative and under the provisions of State and Federal legislation. It will include a preliminary survey of agricultural education in foreign countries. Required of juniors in *agricultural education*. Elective for students in *secondary education*.

Professor Stivers.

304. RURAL COMMUNITY PROBLEMS.—Sem. 2.

Rec. 3.

A study of the more important social and economic problems confronting the rural community. Social topics receiving emphasis will be the rural school, the rural church, farmers' clubs, the farm bureau, part-time schools of agriculture, the community fair, extension service, recreation and health. Among the rural economic problems discussed will be farm credits, the farm loan bank, farm ownership and tenancy, farm equipment, diversification of crops, choice of crops, cost of farm products, marketing farm products, etc. Required of juniors in *agricultural education*. Elective for students in *secondary education*.

Professor Chesnutt.

305-6. VOCATIONAL EDUCATION.—Sem. 1 and 2.

Rec. 2.

This course will consider: Industrial and social changes giving rise to the demand for vocational training, the historical development of vocational training in this country with its European background; present conditions and tendencies. Elective for students in *education*.

Professors Stivers and Chesnutt.

401. METHODS OF TEACHING IN SECONDARY SCHOOLS.—Sem. 1. Rec. 2.

The following topics will be considered: purposes of secondary instruction; classroom management; selection and arrangement of subject matter; types of learning; interest and economy in learning; instruction and individual differences; supervised study; methods in class teaching; practice in teaching and lesson planning; measuring results of teaching; organized observation of teaching. Required of all students in *education*.

Professor Judd.

402. PRINCIPLES OF SECONDARY EDUCATION.—Sem. 2.

Rec. 2.

This course will constitute a consideration of the following topics: The secondary school pupil with reference to physical and mental traits and to individual differences; the character and classification of the secondary school population; the secondary school with reference to its purpose, development, and relationships; the means and materials of secondary education. Required of all students in *secondary education*. Elective for students in *agricultural education*.

Professor Judd.

404. OBSERVATION AND PRACTICE TEACHING.—Sem. 2.

Rec. 3.

Seniors in *secondary education* will be required to observe class teaching in the Lee County High School, to make lesson plans, and to teach classes in subjects in which they are majoring.

Professor Judd.

405-6. PRACTICUM IN SECONDARY EDUCATION.—Sem. 1 and 2.

Rec. 2.

This course is an elective for seniors in *secondary education*. It will comprise the investigation of specific educational situations and problems. Findings will afford data for graduating thesis.

Professor Judd.

407-8. METHODS IN TEACHING VOCATIONAL AGRICULTURE.—

Sem. 1 and 2.

Rec. 3. Lab. 1½

The purpose of this course is to acquaint the student with the best methods of teaching agriculture from a vocational point of view. The lesson plan, the home project, the project outline, the group project, part-time and evening courses, the use of illustrative material, the cataloguing of bulletins, and other reference material, and the professional improvement of teachers are some of the topics to be discussed. The laboratory period will afford opportunity for the preparation of illustrative material for the development and presentation of type laboratory lessons, and for occasional conferences. Required of seniors in *agricultural education*.

Professors Stivers and Chesnutt.

409-10. PRACTICUM IN AGRICULTURAL EDUCATION.—Sem. 1 and 2.

Rec. 2.

Agricultural education offers many problems for the advanced student. A study of secondary courses in agriculture will be made with a view to determining their vocational adaptability. Community surveys as a basis for the organization of vocational courses in agriculture will be treated in detail. Elective for students in *agricultural education*.

Professors Stivers and Chesnutt.

412. OBSERVATION AND PRACTICE TEACHING.—Half Sem. 2.

Rec. 6.

Seniors in *agricultural education* will be required to observe class teaching in the Lee County High School, to make lesson plans, to supervise study periods, to conduct laboratory exercises and field trips, and to teach classes in the various subjects offered in the vocational agricultural schools.

Professor Worley.

COLLEGE OF ENGINEERING AND ARCHITECTURE

CIVIL ENGINEERING

Professor Callan
Professors Baughman and Hulse
Assistants Taylor and McFaden

The Civil Engineering School of Auburn was organized in 1872, and was the first organization in the South. Its aims have always been:

First; To furnish a broad fundamental training in the arts and sciences upon which the various branches of Civil Engineering are based.

Second; To develop initiative, resourcefulness and power for independent thought, and

Third; To provide the necessary practical work to make its courses both interesting and valuable, thus enabling the student to enter readily into professional practice after graduation. Such subjects as Surveying, Mapping, Testing and inspecting materials of construction, Design of steel and concrete structures, Water Supply, Sewerage, Technical Writing, Valuation, Contracts and Specifications, and Highway Engineering are emphasized.

During the first two years instruction is given in the fundamental Arts and Sciences, work in English being emphasized. During the last two years instruction is given in Hydraulics, Water Supply, Sewerage, Topographical, Railroad, Highway, Structural Steel, Concrete, and Efficiency Engineering. Opportunity is also given for the student to elect work in the Electrical, Mechanical, Highway, General, and Architectural courses.

Earnest effort has been made to correlate theory with practice. Professional practice work is given in Surveying, Hydraulic Engineering, Testing of materials of construction, Detailing and Designing Engineering Structures, and inspection of construction work under way.

Students in the course in civil engineering are offered in the senior year certain options in mining subjects which may be substituted for an equivalent amount of work in the civil engineering course. The optional subjects are:

Mining Engineering C. E. 459, 460.—Sem. 1 and 2. Rec.3.

Economic Geology, Chem. 342.—Sem. 2. Rec. 2.

Metallurgy, Chem. 402.—Sem. 2. Rec. 5.

102. SURVEYING.—Sem. 2.

Rec. 2. Field 2.

Use, care and adjustment of surveying instruments; plotting and calculation of areas and volumes; running levels and plotting profiles; laying grade on sewers and drains.

Professor Hulse.

201. RAILROAD SURVEYING.—Sem. 1.

Rec. 2. Field 2.

Prerequisite: Mathematics 102.

Preliminary surveys; location surveys; construction surveys; simple, compound and spiral curves; grades and vertical curves; cross section and calculation of earthwork; calculation of overhaul; borrow pits.

Professor Hulse.

202. TOPOGRAPHIC SURVEYING.—Sem. 2.

Rec. 2. Field 2.

Prerequisite: C. E. 102.

Stadia and hand level methods; conventional signs; parting off land; precise leveling; city and hydrographic surveying and U. S. land surveys.

Professor Hulse.

204. TOPOGRAPHIC MAPPING.—Sem. 2.

Rec. 0. Lab. 2.

Prerequisites: C. E. 102 and C. E. 201.

Conventional signs and map work.

Professor Hulse.

210. SUMMER VACATION WORK

Prerequisite: Sophomore standing.

All students in the Civil and Highway Engineering courses will be required to furnish evidence of having been employed in engineering work during at least six weeks of vacation following the sophomore year. Students unable to obtain work will be required to submit a report covering one of the following options:

- (a) Investigation by research or reading.
- (b) Critical examination of some engineering project.
- (c) Critical reading and abstract of a stated amount from an approved list of books.

The details of these options are prescribed by the department.

Professor Callan.

301. GRAPHIC STATICS.—Sem. 1.

Rec. 1. Lab. 2.

Prerequisite: M. E. 212.

Graphical representation of stresses in Howe, Pratt, Fink, and other trusses. The student is required to determine and tabulate dead, snow and windload stresses and to combine them so as to determine the maxima and minima.

Professor Hulse.

302. STRUCTURAL DETAILS.—Sem. 2.

Rec. 1. Lab. 3.

Prerequisite: C. E. 301.

The use of the structural steel handbooks; structural steel fabrication; drafting room conventions and practice; detailed computation of weight of roof or bridge truss, or plate girders; efficiency of riveted connections; beam, post and stringer, connections; built-up columns; crossbracing connections; and special training in neat and rapid lettering.

Professor Hulse.

303. MATERIALS LABORATORY.—Sem. 1.

Rec. 0. Lab. 2.

Prerequisite: Junior standing.

Methods of production and inspection of the materials of construction; tests in tension and compression, shear and flexure are made, according to latest standards and specifications

on such materials as iron, steel, wood, and cement. Stress strain diagrams are plotted. The usual tests on cement such as specific gravity, fineness, etc., are also made.

Professor Callan.

304. FIELD ASTRONOMY.—Sem. 2.

Rec. 3. Lab. 2.

Prerequisite: C. E. 202.

A study is made of trigonometric formulae, measurement of base lines, triangulation, methods of precise leveling, field astronomy, the principles of adjustment of error in engineering problems, and the determination of time, latitude, azimuth, and longitude.

Professor Hulse.

306. HYDRAULICS.—Sem. 2.

Rec. 3. Lab. 0.

Prerequisite, M. E. 212.

A brief treatment of hydrostatics; the flow of liquids over weirs, through pipes and orifices, and consequent losses of head; hydronamics; experimental data; principles of design of water wheels of impulse and turbine type; and design of pipe lines. Considerable problem work is required.

Professor Baughman.

308. SURVEYING FOR ARCHITECTS.—Sem. 2.

Rec. 2. Field 2.

Prerequisite, Mathematics 102.

Problems similar to those encountered in building construction; use of surveying instruments in laying out foundations; planning and staking out drains; and topographic maps of building sites.

Professor Hulse.

310. SUMMER VACATION WORK

The same regulations obtain for this course as for C. E. 201.

Professor Callan.

401. THEORY OF STRUCTURES.—Sem. 1.

Rec. 3. Lab. 0.

Prerequisites: C. E. 301 and C. E. 302.

Algebraic and graphic stress computation methods for dead and uniform live loads applied to roof trusses of the various types, cranes, Pratt, Warren, Howe, Pettit, Baltimore and Camelback bridge trusses. Absolute maximum bending moment, maximum shear and moment at any point due to Cooper's E-60 concentrated moving loads, and mathematical principles underlying such computations.

Professor Callan.

402. THEORY OF STRUCTURES.—Sem. 2.

Rec. 3. Lab. 0.

Prerequisite: C. E. 401.

A continuation of C. E. 401. Maximum and minimum stresses in trusses of the various types, cross framing, lateral bracing, portals, influence line theory and its advantages as compared with the algebraic methods are considered. Considerable problem work is required in both semesters of this course.

Professor Callan.

403. STRUCTURAL DESIGN.—Sem. 1.

Rec. 1. Drafting 3.

Prerequisites: C. E. 301 and 302.

Detailed designs are worked out according to latest specification and drafting-room standards, of typical steel mill building construction, including roof trusses, purlins, girts, siding, wall connections, etc., and a railroad deck plate girder. Stress sheets, erection diagrams, marking systems, checking, estimating, making layouts, bills of materials, etc.

Professor Callan.

404. ADVANCED DESIGN.—Sem. 2.

Rec. 1. Drafting 3.

Prerequisite, 401.

A continuation of C. E. 401. A detailed design is made of a railroad or highway truss bridge, including all computations for roller nests, masonry plates, floor beam and stringer connections, eye bars and posts, portal and sway bracing, riveted joints, hip vertical, compression members, and eccentric connections, etc.

Professor Callan.

405. REINFORCED CONCRETE.—Sem. 1.

Rec. 3. Lab. 0.

Prerequisites: M. E. 321 and C. E. 301.

The fundamental principles of reinforced concrete construction, Taylor and Thompson's method of getting the most compact concrete from mechanical analysis curves, and the latest experimental data. A rigorous analysis of the theory underlying plane and tee beam, and slab design is made. Considerable problem work is required.

Professor Callan.

406. CONCRETE DESIGN.—Sem. 2.

Rec. 2. Lab. 0.

Prerequisite: C. E. 405.

A continuation of C. E. 405. Detailed designs of plain and tee beam, column, and slab construction are required, including schedules for bending of the reinforcement. Reinforced concrete retaining walls of the plain and counterforted types, pipe, box, and arch culverts, stairways, abutments, foundations, and other miscellaneous types are included.

Professor Callan.

407. WATER SUPPLY.—Sem. 1.

Rec. 3. Lab. 0.

Prerequisite: C. E. 306.

A study is made of supply, quality of water, drinking water and diseases, river and stream, natural purification of water, structures, the design, construction and maintenance of city water works including basins and filters, aqueducts, pipe lines, distributing systems, dams, reservoirs, standpipes, pumping machinery and water power development.

Professor Baughman.

408. SEWERAGE.—Sem. 2.

Rec. 3. Lab. 0.

Prerequisite: C. E. 407.

Design, construction, and maintenance of sewerage systems for towns and cities; treatment of sewage; consideration of run off from paved and built up areas; maximum rainfall, separate and combined systems.

Professor Baughman.

409. ENGINEERING LAW AND VALUATION.—Sem. 1.

Rec. 1. Lab. 0.

Prerequisite: Junior standing.

The fundamentals of law as they pertain to engineering; principles of valuation of public utilities and engineering projects.

Professor Baughman.

410. RAILWAY ENGINEERING.—Sem. 2.

Rec. 2. Lab. 0.

Prerequisite: C. E. 201.

Inspection, promotion and organization of railroad projects; alignment and grades; materials and methods of construction; operating, signaling, expenditures; the locomotive; betterment surveys.

Professor Baughman.

411. SEMINAR AND FOUNDATIONS.—Sem. 1.

Rec. 1. Lab. 0.

Prerequisite: Senior standing.

A course intended to bring the student in touch with phases of Civil Engineering not encountered in other courses. Pre-

sentation and discussion of papers on such subjects as cofferdams, piling, buttresses, efficiency methods, masonry construction, engineering examinations, investigations, reports, stereotomy, erection of falsework, tunnelling, blasting, excavation, construction and use of graphical charts.

Professor Callan.

412. SEMINAR AND THESIS.—Sem. 2.

Rec. 2. Lab. 3

Prerequisite: Senior standing.

Each candidate for graduation is required to present a satisfactory thesis to the professor of Civil Engineering. This subject may be either a design of some engineering structure, or construction method, or an investigation of some engineering problem. The thesis must be of a form prescribed by the department.

Professor Callan.

414. INSPECTION TRIP.—Sem. 2.

An extended trip of inspection of engineering activities is made in the Birmingham district each year. The department arranges the trips at as low a cost as possible commensurate with the purposes desired. A large number of Auburn's prominent alumni are in charge of work in the district and they are always glad to facilitate the trip in every way possible. A week is required for the trip.

Professor Callan.

459-460. MINING ENGINEERING.—Sem. 1 and 2.

Rec. 3. Lab. 0.

Plans of mines, trackwork, haulage, hoisting, ventilation, drainage, design of tipples and other mine structures, selection and lay out of general mining equipment.

Professor Callan.

501-2. ADVANCED STRESS ANALYSIS.—Sem. 1 and 2.

Rec. 3.

Prerequisite: 401-2.

Subjects hurriedly covered in Senior year are reviewed at length. Stress analysis of miscellaneous structures; the method of coefficients; application of influence line theory applied to truss problems, and deflection of structures.

Professor Callan.

503-4. ENGINEERING DESIGN.—Sem. 1 and 2.

Rec. 1. Drafting 3.

Prerequisite: C. E. 403-4.

Complete designs are drawn for miscellaneous engineering structures from assigned data. Special attention is always given to the factory, warehouse, or high building construction, railroad bridge trusses, train sheds, or through plate girders.

Professor Callan.

505-6. ADVANCED REINFORCED CONCRETE.—Sem. 1 and 2. Rec. 2. Draft. 3.

Prerequisite: C. E. 405-6.

A thorough inquiry into latest experimental data on reinforced concrete; complete working plans for retaining walls; warehouse construction; piers, abutments; footings, etc.

Professor Callan.

507-8. MATERIALS OF CONSTRUCTION.—Sem. 1 and 2.

Rec. 2. Lab. 0.

Prerequisite: Materials Lab. 303.

Subjects hurriedly covered in C. E. 303 are reviewed at length. Current literature is analyzed; and the latest experimental data as described in Johnson, Withy, and Aston's "Materials of Construction" studied.

Professor Callan.

509-10. THESIS.—Sem. 1 and 2.

Rec. 3. Equivalent

Prerequisite: Bachelor's degree.

Graduate students applying for degree of Civil Engineer will be required to prepare and present a thesis the regulations for which are the same as those prescribed for seniors. The thesis, however, must be more exhaustive in scope and original in nature.

Professor Callan.

ELECTRICAL ENGINEERING

*Professor Dunstan**Professor Hill**Laboratory Assistants McIlvaine and Miller*

301. ELECTRICAL ENGINEERING.—Sem. 1.

Rec. 3. Lab. 0.

Design, construction, installation, and operation of direct current generators and motors. The selection of machinery for given conditions, performance guarantees, acceptance tests for heating, efficiencies, parallel running troubles, remedies and repairs.

Professor Dunstan.

302. ELECTRICAL ENGINEERING.—Sem. 2.

Rec. 3. Lab. 0.

Central station appliances and distribution for lighting and power service by direct currents; switch boards and appliances; calculation of circuits of various kinds; arc and incandescent lighting, metering, systems of charging for service, economics of generating plants.

Professor Dunstan.

303-4. ELECTRICAL ENGINEERING.—Sem. 1 and 2.

Rec. 3. Lab. 0.

Direct and alternating machinery. Direct current generators, motors, and other appliances; alternators, transformers, and other alternating current appliances.

Professor Dunstan.

305. ELECTRICAL ENGINEERING.—Sem. 1.

Rec. 2. Lab. 0.

A study of the fundamental laws of electricity and magnetism. For non-electrical engineering students.

Professor Hill.

306. ELECTRICAL ENGINEERING.—Sem. 2.

Rec. 2. Lab. 0.

Construction and operation of direct and alternating current machines; tests for efficiency, regulation, and heating; generation and distribution of electric power.

Professor Hill.

307-8. ELECTRICAL ENGINEERING.—Sem. 1 and 2.

Rec. 1. Lab. 0

Lectures and instructions for the measurement of current, voltage, resistance, capacities, magnetic measurements, stray power, brake tests, heat runs, and related subjects.

Professor Hill.

311. ELECTRICAL ENGINEERING.—Sem. 1.

Rec. 2. Lab. 0.

Wiring and illumination; laws of illumination, calculation of lighting and power circuits, costs of wiring, insurance rules governing the installation of wires, and wiring specifications.

Professor Hill.

313. ELECTRICAL LABORATORY.—Sem. 1.

Rec. 0. Lab. 4.

Galvanometer work, resistance and magnetic measurements, operation of direct current motors and dynamos, characteris-

tics of direct current machinery, methods of adjusting and compounding. *Professor Hill and Assistant McIlvaine.*

314. ELECTRICAL LABORATORY.—Sem. 2. Rec. 0. Lab. 4.

Efficiency tests, location of troubles in machine and on line, switch boards and appliances, and general experience in the operation of a direct current station.

Professor Hill and Assistant McIlvaine.

421. ELECTRICAL ENGINEERING.—Sem. 1. Rec. 5. Lab. 0.

Prerequisite: Math. 301.

Alternating current generators, calculation of alternator voltage, regulation by various methods, parallel running, transformers, induction motors, synchronous motors and rotaries; harmonic analysis of wave forms, and expressing the same in Fourier series and calculation of current produced in various circuits.

Professor Dunstan.

422. ELECTRICAL ENGINEERING.—Sem. 2. Rec. 2. Lab. 0.

A continuation of course 421.

Professor Dunstan.

424. ELECTRICAL ENGINEERING.—Sem. 2. Rec. 2. Lab. 0.

Line induction and capacity, the application of hyperbolic functions to the calculation of the regulation of long transmission lines, effect of harmonics in E. M. F. waves, surges. Stresses in conductors and line construction.

Professor Dunstan.

425-6. ELECTRICAL LABORATORY.—Sem. 1 and 2. Rec. 0. Lab. 3.

Operation of alternating current machinery, calculating alternator regulation, efficiency tests, transformer connections, transformer testing for efficiency and regulation, induction motor testing, circle diagram. Brake tests, single phase induction motors, synchronous motors, V-curves, rotaries, and synchronizing.

Professor Dunstan.

427. TELEPHONE ENGINEERING.—Sem. 1. Rec. 2. Lab. 0.

Telephone types, substation equipment magneto and common battery switch boards, exchange equipment, telephone power plants, overhead and under ground circuits, protectors, coin collectors and meters, party lines, branch exchanges, trunking and toll boards.

Professor Hill.

429. TELEPHONE LABORATORY.—Sem. 1. Rec. 0. Lab. 2.

Details of telephone construction, assembly of switch board parts, storage batteries, location of faults in cable and lines, capacity and insulation tests, common battery and magneto switch boards, and trunking schemes.

Professor Hill.

430. ELECTRICAL ENGINEERING.—Sem. 2. Rec. 2. Lab. 0.

Electric railways; street and interurban service, train resistance, grades, curves, line and track, car and power plant equipment, both direct and alternating currents, substations and related topics.

Professor Hill.

431-2. ELECTRICAL ENGINEERING.—Sem. 1 and 2. Rec. 3. Lab. 0.

Direct current motors and generators; alternating currents and alternating current machinery. For students in special course.

Professor Hill.

433-4. ELECTRICAL LABORATORY.—Sem. 1 and 2. Rec. 0. Lab. 4.

Laboratory work suitable for above special course.

Professor Hill.

133-4 WIRELESS TELEGRAPHY.—Sem 1 and 2.

Rec. 7.

In response to a considerable demand it has been decided to offer a special course in wireless telegraphy. The practice work in this subject will be under the charge of a licensed wireless operator. Every effort will be made to offer to students opportunities to become familiar with the setting up, installation, and testing of wireless apparatus, as well as to become expert in sending and receiving.

Wireless messages are constantly being picked up with the wireless station, these messages coming from ships at sea, and from various wireless stations along the Atlantic Coast.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education and who are not prepared to take the regular course described above.

Assistant Miller.

HIGHWAY ENGINEERING

Professor Baughman

301. HIGHWAY ENGINEERING.—Sem. 1.

Rec. 2. Lab. 0.

Economic principles of road improvement; location, grades, and drainage of roads; materials and types of construction; street plans for cities and towns.

Professor Baughman.

302. HIGHWAY ENGINEERING.—Sem. 2.

Rec. 3. Lab. 0.

Continuation of 301.

Professor Baughman.

303. HIGHWAY ENGINEERING.—Sem. 1.

Rec. 0. Lab. 2.

Testing the physical properties of non-bituminous road building materials.

Professor Baughman.

304. HIGHWAY LABORATORY.—Sem. 2.

Rec. 0. Lab. 4.

Testing bituminous road building materials, and the design of roads.

Professor Baughman.

405-6. HIGHWAY ENGINEERING.—Sem. 1 and 2.

Rec. 3. Lab. 0.

Highway laws and finance; bonds and amortization, organization of highway construction; inspection problems; reports; promotion work.

Professor Baughman.

407. HIGHWAY LABORATORY.—Sem. 1.

Rec. 0. Lab. 3.

Advanced laboratory work in testing materials used in the construction of highways.

Professor Baughman.

408. HIGHWAY LABORATORY.—Sem. 2.

Rec. 0. Lab. 6.

Advanced problems in highway design.

Professor Baughman.

409-410. HIGHWAY ENGINEERING.—Sem. 1 and 2.

Rec. 1. Lab. 0.

An elementary elective course in streets and roads for students not taking the longer courses in highway engineering.

Professor Baughman.

411-412. HIGHWAY ENGINEERING.—Sem. 1 and 2.

Rec. 2. Lab. 0.

An elective course in streets and roads for students not taking the longer courses in Highway Engineering.

Professor Baughman.

MACHINE DESIGN AND MECHANICAL DRAWING

*Professor Fullan
Professor Thomas
Instructor Hanna
Assistant Pearson*

151-2. MECHANICAL DRAWING.—Sem. 1 and 2.

Rec. 0. Lab. 4.

The work is given in the following order: (1) Freehand drawing; freehand lettering; (2) linear drawing—geometrical constructions; (3) cavalier, cabinet and isometric projections; (4) orthographic projections, sections and intersections; (5) developments of surfaces and construction of methods; (6) sheet metal problems with layouts; (7) tracing and blue print making.

Credit will be given only for work as assigned by the instructor and as completed in the drawing room by the students in regular attendance of the class. Special assignments of work to be done outside of the class room must be pre-arranged with the professor in charge of the department, otherwise the plates will not be accepted.

Professor Thomas; Instructor Hanna; Assistant Pearson.

253. DESCRIPTIVE GEOMETRY.—Sem. 1.

Rec. 2. Lab. 4.

Problems given include the theory of projections—point, line and plane; shades and shadows, and perspective; tangents, normals; single curved, double curved and warped surfaces; intersections, and practical applications of descriptive geometry to engineering work.

Professor Thomas.

203. ENGINEERING DRAWING.—Sem. 1.

Rec. 0. Lab. 4.

Required of chemical engineering students in lieu of descriptive geometry.

(2) Freehand sketching of machine parts; taking measurements; detail shop drawings; assembly drawings of machine tools.

(2) Types of engineering lettering; system of dimensioning; bills of materials.

(3) Bolts, nuts, and screws; screw threads; locking devices.

(4) Elements of structural drafting; templates, girders, roof truss.

(5) Boiler settings; powerhouse plans; elevations and sections of machinery in power plants; retorts-condensers-grinding and mixing machinery.

Professor Thomas and Instructor Hanna.

254. ENGINEERING DRAWING.—Sem. 2.

Rec. 0. Lab. 4.

The course consists of lectures and drafting practice in the following:

(6) Production of finished drawings, accurate, neat and correct presentations; shade lines; checking; title forming.

(7) Reduction and enlargement problems—practice in use of engineer's scale; methods of reading working drawings rapidly.

(8) Methods of cutting sections; materials in section; assembly and detail drawings; tracing and blue print making.

(10) Elements of machine drawings—power-plant accessories, pipe lines; steam heating systems, refrigeration plant.

(9) Electrical symbols, wiring diagrams, conventional sec-

tions, switch board connections; motors, transformers, etc.

Professor Thomas and Instructor Hanna.

255-6. **MANUAL AND INDUSTRIAL ARTS.**—Sem. 1 and 2. Rec. 1. Lab. 3.

The work is arranged for the needs of students of the sophomore and junior classes, men and women, particularly suited to the latter—who intend to teach this branch in rural schools or high schools. Home industries is given important consideration. A large part of the course consists of training in the vocational lines that lead to the industries.

Professor Fullan

356. **THEORY OF MACHINES.**—Sem. 2.

Rec. 3. Lab. 0.

(a) **Kinematics:** Motion in machines is analyzed by means of kinematic chains, velocity diagrams, cams, gear wheels, screws and link work. Illustrated lectures showing the application of mechanism to design of machines are given throughout the course.

(b) **Mechanics of Machinery:** The dynamic effects in machine parts on motion, inertia and centrifugal forces are investigated in problems in engine governors, speed fluctuations in machinery, fly-wheels, and balancing of parts of steam and gas engines.

Professor Fullan.

355. **GRAPHICS OF MACHINES.**—Sem. 1.

Rec. 2. Lab. 0.

Graphic methods are applied to the design of structures and machine frames; the investigation of friction losses and the efficiency of mechanisms; to the balancing of engines and to the determination of stresses due to inertia of moving parts.

Professor Fullan.

361-2. **MACHINE DESIGN.**—Sem. 1 and 2.

Rec. 0. Lab. 4.

(a) **Design of Machine Parts:** Cams, gear wheels, quick return motions, link combinations and machine fastenings. Tracings and blue prints of problems are required in order to familiarize the student with drafting room practice.

(b) **Inventive Design:** The course consists of problems in invention which are developed by drawings and specifications in form corresponding to that required by the United States Patent Office. The purpose of the course is to develop the inventive capacity of the student through simple problems which are rated on originality, adherence to specifications, clearness, accuracy and neatness.

Professor Fullan.

366. **MOTION PICTURE PROJECTION.**—Sem. 2.

Rec. 2. Lab. 3.

The course in motion picture projection is offered to meet the fast approaching needs of prospective Salesman, Teachers, County Agents, and Home Demonstration Agents who must become thoroughly familiar with Visual Instruction and Motion Picture presentation if they are to keep abreast with modern methods of handling their work in the most efficient and effective ways.

The course consists of lectures and laboratory work embracing:

(a) Visual Instruction methods, materials, and relative values of presentation.

(b) Training of Employees through Visual Instruction; factory methods, machinery and systems.

(c) Training of Sales Forces through demonstration of production methods and actual uses of the articles by the consumers.

(d) Demonstration of agricultural methods, machinery, improvements of farming in all lines; Home Demonstration Agents' problems and helps through the use of lantern slides and motion pictures.

(c) Electrical elements-wiring-projection lamp-accessories, etc.

(f) The Optics of Projection Apparatus.

(g) Operation, care of, use and repair of commercial machines, portable machines, lantern slide projectors, automatic "Daylight" exhibition outfits.

(h) Repair and care of films and lantern slides.

(i) Organizaton, operation, and management of the Motion Picture business;—Relations of the producing corporation, the distributing exchange, and the exhibitor.

Professor Thomas.

371-2. FARM SHOP WORK.—Sem. 1 and 2.

Rec. 0. Lab. 4.

The course arranged for students of the junior class in Vocational Agriculture. The work is prepared with the view of familiarizing the student with the use of tools through exercise in the construction of full size projects used on the farm.

(a) *Farm Carpentry*: Chicken and hog feeders, fruit dryers, orchard ladders, feeding troughs, swine houses, farm gates, wagon bodies, shipping crates, etc.

(b) *Farm Blacksmithing*: Gate hooks and staples, hinges, cleavices, swivels, rings, chains, wagon irons and bolts; soldering and brazing; sharpening of picks and plows; horse-shoeing.

Professor Fullan.

467-8. MACHINE DESIGN.—Sem. 1 and 2.

Rec. 2. Lab. 0.

The lectures cover general instructions, such as the selection of materials for machines, proportion of parts to secure symmetry, strength and cheapness of manufacture. Problems include the calculation of machine parts and design of complete machines. Illustrated lectures are given at intervals throughout the year.

Professor Fullan.

469-470. MACHINE DESIGN.—Sem. 1 and 2.

Rec. 0. Lab. 4.

The course includes the solution of problems involving the design of complete machines to work under specific conditions accompanied by full assembly and detailed drawings, tracings and blue prints.

Professor Fullan.

472. ENGINEERING WRITING.—Sem. 1.

Rec. 1. Lab. 2.

The purpose of the course is to familiarize the students with the forms of technical writing and to provide exercise with written work. The lectures include a study of graphic methods in presenting facts, charts, curves and diagrams; engraving processes and the preparation of drawings for illustration; photographic illustrations; use of camera; study of trade catalogues, patent office reports, magazines and scientific papers.

Professor Fullan.

475. ENGINEERING CONTRACTS AND SPECIFICATIONS.—Sem. 1.

Rec. 1. Lab. 0.

The work is given in lectures and recitations upon engineering specifications and the elements of the laws of contracts. Exercises in the writing of specifications for machinery and engineering work are prepared by the student in note-book form. Each student is assigned an engineering project for

which full specifications, and contract in legal and approved form are required.

Professor Fullan.

581-2. MACHINE DESIGN.—Sem. 1 and 2.

Rec. 3. Lab. 0.

The work offered during the post-graduate year is an extension of that of the senior year. Lectures include problems which involve the manufacture of machines and machine parts, and the application of graphical methods of calculation and the use of factors of enlargement and reduction applied in current practice. A research study into the patent office records of some machine or device is given for the purpose of developing the inventive capacity of the student.

Professor Fullan.

VOCATIONAL COURSES

Special courses are offered for disabled soldiers who are assigned to the institution by the Federal Board for Vocational Education and who are not prepared to take the regular courses described above.

Professor Fullan and Instructor Hanna.

MECHANICAL ENGINEERING

Professor Wilmore

Professor Hixon

Instructors Carlovitz and Zobel

Laboratory Assistants, Buchanan, Chambers, Gottlieb, McDonald, Pate, Shealy, and Steindorf

101. SHOP WORK.—Sem. 1 or 2.

Rec. 0. Lab. 3.

(a) Carpentry. (Half Semester) The use of tools, different kinds of joints used in carpentry and cabinet work, with some construction and project work.

(b) Wood Turning. (Half Semester) Plain and spherical turning and chuck work followed by exercises on whole and split patterns and core boxes.

Instructor Zobel, Assistants Gottlieb, Pate, and Shealy.

102. SHOP WORK.—Sem. 1 or 2.

Rec. 0. Lab. 3.

(a) Blacksmithing. (Half Semester) Drawing, upsetting, bending and welding, also forming, hardening and tempering of steel. Work in electric welding and in oxy-acetylene welding and cutting will be given.

(b) Foundry. (Half Semester) Exercises in foundry work including molding, core making, and management of cupola.

Assistants Chambers and Steindorf.

107. HEAT ENGINES.—Sem. 1.

Rec. 2. Lab. 0.

An elementary descriptive course in which attention is called to the different types of engines and boilers, valve gears and valve setting, piping systems and auxiliary apparatus for power plants.

Professor Hixon and Instructor Carlovitz.

108. GAS ENGINES.—Sem. 2.

Rec. 2. Lab. 0.

A descriptive course in gas, gasoline, and oil engines; different types, different cycles, carburetion, ignition, troubles, and remedies.

Instructor Carlovitz.

212. APPLIED MECHANICS.—Sem. 2.

Rec. 3. Lab. 0.

The fundamental laws of mechanics are studied while special attention is given to the application of these principles to engineering problems.

Professor Hixon and Instructor Carlovitz.

213-4. SHOP WORK.—Sem. 1 and 2.

Rec. 0. Lab. 6.

Bench and vise work including chipping, filing and scraping, and machine tool work in turning, boring, screw cutting, planing and milling. Some tool making and repair work are given.

Mr.-----

234. MECHANICAL LABORATORY.—Sem. 2.

Rec. 0. Lab. 2.

Calibration of instruments, indicator work, valve setting, coal and furnace gas analysis, and lubricant testing.

Instructor Carlovitz.

321. STRENGTH OF MATERIALS.—Sem. 1.

Rec. 3. Lab. 0.

The properties and characteristics of the materials of engineering construction are studied, and the development of methods of calculating stress under different conditions of load is explained. Problems are given on beams, girders, columns, shafts, and built up structures.

Professor Hixon.

331-2. MECHANICAL LABORATORY.—Sem. 1 and 2.

Rec. 0. Lab. 2.

Calibration of instruments; adjustment and operation of gas, gasoline, and steam engines; efficiency tests of machines such as hoists, jack screws, gearing, belts, and other transmission devices; valve setting and power measurements.

Instructor Carlovitz.

346. HYDRAULICS.—Sem. 2.

Rec. 3. Lab. 0.

Pressure on dams and gates; flow through orifices, pipes, channels, and over weirs; theory of impulse wheels, turbines, and pumps. Rainfall, run off, evaporation and seepage.

Professor Hixon.

348. MATERIALS OF ENGINEERING.—Sem. 2.

Rec. 2. Lab. 0.

Manufacture of iron, steel, and cement; casting and heat, treatment of metals; stresses, elastic limit, and ultimate strength; uses and characteristics of the materials of construction such as iron, steel, various alloys, timber, cement, and concrete.

Professor Hixon.

441. THERMODYNAMICS.—Sem. 1.

Rec. 5. Lab. 0.

The fundamental principles underlying the transformation of heat into work are studied. Gases are first considered and later the saturated and superheated vapors used in commercial work. The cycles and efficiencies of steam engines, internal combustion engines, hot air engines, air compressors, and refrigerating machines are studied.

Professor Wilmore.

443. THERMODYNAMICS.—Sem. 1.

Rec. 3. Lab. 0.

Similar to Thermodynamics 441, but somewhat abbreviated.

Professor Hixon.

442. POWER PLANT ENGINEERING.—Sem. 2.

Rec. 3. Lab. 0.

A study is made of the practical applications of power plant machinery. The different elements are considered and the efficiencies of different combinations discussed. Problems are

solved involving the designing of plants for a specific service, including estimate of cost and operating expense.

Professor Hixon.

446. HEATING AND VENTILATION.—Sem. 2.

Rec. 2. Lab. 0.

Different methods of heating and ventilating buildings. The relative efficiency of hot water, steam, and warm air as mediums for heating different kinds of buildings. Attention is given to the design and operation of healthful heating systems for residences.

Professor Wilmore.

451. MECHANICAL LABORATORY.—Sem. 1.

Rec. 0. Lab. 3.

Fuel analysis and heat determination, flue gas analysis, oil and lubricant testing, and valve setting and indicator analysis. Tests of engines, boilers, pumps, gas and gasoline engines, complete power plants, and when opportunity offers, tests of commercial plants.

Professor Hixon and Instructor Carlovitz.

452. MECHANICAL LABORATORY.—Sem. 2.

Rec. 0. Lab. 3.

The course includes work in testing the strength of materials, as iron, steel, wood, cement in tension, compression and transverse loading, and the calibration of weirs, nozzles, and meters, a study of the flow of water in pipes, and the testing of hydraulic motors and pumps.

Professor Hixon and Instructor Carlovitz.

448. INDUSTRIAL MANAGEMENT.—Sem. 2.

Rec. 2. Lab. 0.

Organization of industry, wage payment systems, estimating and figuring costs, efficiency methods, relations between employees and employers, labor unions, and planning industrial plants.

Professor Wilmore.

453. HYDRAULICS.—Sem. 1.

Rec. 3. Lab. 0.

See description of Hydraulics 346. Given in 1921 only.

Professor Hixon.

GRADUATE STUDENTS

563. POWER PLANT ENGINEERING.—Sem. 1.

Rec. 3. Lab. 0.

(a) Theory, design, and details of modern steam turbines.

(b) Power plant design; conditions of maximum efficiency; relation of different elements of power plants to each other; actual plants are studied and designs worked out.

Professor Wilmore.

564. INDUSTRIAL ENGINEERING.—Sem. 2.

Rec. 3. Lab. 0.

Organization of industry; cost keeping systems; wage systems; employment methods; industrial betterments; planning of industrial plants.

Professor Wilmore.

566-7. MECHANICAL LABORATORY.—Sem. 1 and 2.

Rec. 0. Lab. 3.

Laboratory work supplementary to the class work is provided.

Professor Hixon.

ARCHITECTURE

Professor Biggin
Assistant Professor Barlow
Assistants Spratling, Wellborn

The Department of Architecture was established in June of 1907. Four year courses are offered in Architecture and Architectural Engineering, both leading to the degree of Bachelor of Science. The schedules conform to the "standard minima" of the Association of Collegiate Schools of Architecture. A two-year special course in architecture is offered for the benefit of mature draftsmen.

The course in architecture should be chosen by men and women who desire to follow architecture as an art, and the first requirement is the ability to design. Facility in design depends on a knowledge of what others have done and on the trained power to express one's ideas graphically. So the history of architecture, painting and sculpture is taught in lantern lectures accompanied by library research work and sketching, while freehand drawing in its various forms of pencil, charcoal, pen and ink, water color and clay modeling runs throughout the course.

Architectural design embraces as inseparable parts both design and construction, and is taught by problems requiring a month or more for solution and developed by the student under constant personal criticism. These are accompanied by short sketch problems to promote quickness of thought and execution, with no criticism until after they are turned in for judgment. The subjects and terms of all problems follow as closely as possible the practice of an architect's office. A general course in building construction and superintendence is supplemented by special work in the various engineering departments of the college along such lines as wiring and illumination, heating and ventilation, reinforced concrete and steel frame fireproof construction.

The course in architectural engineering is for those whose preference leans strongly toward the structural side of architecture. Less design and freehand drawing are required in this course and much more time is devoted to advanced engineering construction. It prepares men therefore to specialize along construction lines in their architectural practice or to excel in the field of large-scale contracting.

Since the important practical side of architecture can be obtained only by office experience, all students are urged to spend at least a part of the summer vacation working with a practicing architect. Such students make more rapid progress

in their subsequent college work and college credit is therefore given for this.

121. **FREEHAND DRAWING.**—Sem. 1.

Rec. 0. Lab. 4.

Work in pencil from casts of architectural ornament, architectural fragments and parts of the figure. Out-of-door sketching.

Assistant Spratling.

122. **FREEHAND DRAWING.**—Sem. 2.

Rec. 0. Lab. 4.

Prerequisite: Arch. 121.

Work in pencil and pen and ink from casts and photographs. Out-of-door sketching.

Assistant Spratling.

123. **WATER COLOR.**—Sem. 1.

Rec. 0. Lab. 4.

Work from models, photographs and still life. Conventional and sketch rendering of architectural subjects. Out-of-door sketching.

Assistant Spratling.

124. **WATER COLOR.**—Sem. 2.

Rec. 0 Lab. 5.

Prerequisite: Arch. 123.

Color composition and rendering. Out-of-door sketching.

Assistant Spratling.

141. **DESCRIPTIVE GEOMETRY.**—Sem. 1.

Rec. 1. Lab. 3.

Prerequisite: Solid Geometry.

The fundamental principles of descriptive geometry are studied and applied to the solution of problems in architecture. Shades and shadows.

Professor Biggin and Assistant Wellborn.

142. **DESCRIPTIVE GEOMETRY.**—Sem. 2.

Rec. 1. Lab. 3.

Prerequisite: Arch. 141.

Intersections and developments. Isometric and oblique projections. Perspective.

Professor Biggin and Assistant Wellborn.

191. **ARCHITECTURAL DESIGN.**—Sem. 1.

Rec. 1. Lab. 6.

Elementary architectural composition. Lectures and library research, with drawings in pencil and ink, rendered in wash and color.

Assistant Professor Barlow and Assistant Wellborn.

192. **ARCHITECTURAL DESIGN.**—Sem. 2.

Rec. 1. Lab. 6.

Prerequisite: Arch. 191.

Architectural composition. Lectures, library research and drawing.

Assistant Professor Barlow and Assistant Wellborn.

201. **HISTORY OF ARCHITECTURE.**—Sem. 1.

Rec. 2. Lab. 0.

Origin and development of historic styles of architecture and ornament from early times to the fall of the Roman Empire, stress being laid on the evolution of a style from changes in structural forms, political and religious conditions, and national character. Early Christian and Byzantine architecture. Lectures, with library research and sketching.

Professor Biggin.

202. HISTORY OF ARCHITECTURE.—Sem. 2.

Rec. 2. Lab. 0.

Prerequisite: Arch. 201.

Romanesque and Gothic architecture and ornament. Lectures, with library research and sketching.

Professor Biggin.

221. CHARCOAL DRAWING.—Sem. 1.

Rec. 0. Lab. 4.

Prerequisite: Arch. 122.

Work in charcoal from casts of architectural subjects and antique sculpture. Out-of-door sketching.

Assistant Spratling.

222. CHARCOAL DRAWING.—Sem. 2.

Rec. 0. Lab. 4.

Prerequisite: Arch. 221.

Work in charcoal, pastel and pen and ink from casts, photographs and life. Out-of-door sketching.

Assistant Spratling.

223. WATER COLOR.—Sem. 1.

Rec. 0. Lab. 4.

Prerequisite: Arch. 124.

Advanced work from models and still life. Out-of-door sketching.

Assistant Spratling.

224. WATER COLOR.—Sem. 2.

Rec. 0. Lab. 4.

Prerequisite: Arch. 223.

Work in original composition and from life. Out-of-door sketching.

Assistant Spratling.

291. ARCHITECTURAL DESIGN.—Sem. 1.

Rec. 1. Lab. 9.

Prerequisite: Arch. 192.

Architectural composition and planning. Lectures, library research and drawing.

Assistant Professor Barlow and Assistant Wellborn.

292. ARCHITECTURAL DESIGN.—Sem. 2.

Rec. 0. Lab. 9.

Prerequisite: Arch. 291.

Problems in architectural composition and planning, and studies of detail. Library research and drawing.

Assistant Professor Barlow and Assistant Wellborn.

301. HISTORY OF ARCHITECTURE.—Sem. 1.

Rec. 2. Lab. 0.

Architecture and ornament of the Renaissance and modern times. Lectures, with library research and sketching.

Professor Biggin.

302. HISTORY OF ARCHITECTURE.—Sem. 2.

Rec. 2. Lab. 0.

Prerequisite: Arch. 301.

Colonial and more recent architecture in America. Lectures, with library research and sketching.

Professor Biggin.

325. CLAY MODELING.—Sem. 1. *

Rec. 0. Lab. 4.

Modeling from architectural casts, photographs and sketches.

Assistant Spratling.

326. CLAY MODELING.—Sem. 2.

Rec. 0. Lab. 4.

Prerequisite: Arch. 325.

Modeling from casts and original composition in the solid. Preparation of molds and plaster casts.

Assistant Spratling.

371. BUILDING CONSTRUCTION.—Sem. 1. Rec. 2. Lab. 0.

Materials of construction: properties, manufacture and use of timber, stone, brick, terra cotta, iron, steel, lime, cement, gypsum products, tile, glass, paint, and hardware.

Professor Biggin.

372. BUILDING CONSTRUCTION.—Sem. 2. Rec. 2. Lab. 0.

Prerequisite: Arch 371.

Construction methods and equipment: preparation of site, foundations, walls, floors, roofs, stairs and elevators; hoists, derricks and scaffolds; equipment for excavating, material transporting, piling, pumping, wood working, erection of reinforced concrete and steel work. Mill and fireproof construction. Estimating and superintendence.

Professor Biggin.

374. PLUMBING AND DRAINAGE.—Sem. 2. Rec. 1. Lab. 0.

General sanitation; water supply, filtration and softening; pumping and storage; fire lines; supply, vent and waste systems; plumbing fixtures; sewage disposal.

Professor Biggin.

391. ARCHITECTURAL DESIGN.—Sem. 1. Rec. 0. Lab. 15.

Prerequisite: Arch. 292.

Problems in architectural composition, planning and construction. Library research and drawing.

Professor Biggin and Assistant Professor Barlow.

392. ARCHITECTURAL DESIGN.—Sem. 2. Rec. 0. Lab. 15.

Prerequisite: Arch. 391.

Continuation of problems in architectural composition, planning and construction. Library research and drawing.

Professor Biggin and Assistant Professor Barlow.

403. HISTORY OF PAINTING.—Sem. 1. Rec. 1. Lab. 0.

A brief survey of the development of painting with special reference to mural work. Lectures and library research.

Professor Biggin.

404. HISTORY OF SCULPTURE.—Sem. 2. Rec. 1. Lab. 0.

An outline study of the development of sculpture and its relation to architectural design. Lectures and library research.

Professor Biggin.

427. LIFE CLASS.—Sem. 1. Rec. 0. Lab. 4.

Prerequisite: Arch. 222.

Figure work from life, in color or black and white.

Assistant Spratling.

428. LIFE CLASS.—Sem. 2. Rec. 0. Lab. 4.

Prerequisite: Arch. 427.

Drawing or modeling from life.

Assistant Spratling.

478. WORKING DRAWINGS AND SPECIFICATIONS.—Sem. 2. Rec. 1. Lab. 6.

Preparation of working drawings, details, specifications and estimates, approximating office methods as closely as possible. Professional practice.

Professor Biggin and Assistant Professor Barlow.

491. ARCHITECTURAL DESIGN.—Sem. 1. Rec. 0. Lab. 21.

Prerequisite: Arch. 392.

Advanced problems in architectural composition, planning

and construction. Group problems. Library research and drawing.

Professor Biggin and Assistant Professor Barlow.

492. ARCHITECTURAL DESIGN AND THESIS.—Sem. 2. Rec. 0. Lab. 21.

Prerequisite: Arch. 491.

Continuation of advanced problems in architectural composition, planning and construction. The subject for a thesis problem will be selected in consultation with the faculty and worked up in detail. Library research and drawing.

Professor Biggin and Assistant Professor Barlow.

GRADUATE STUDENTS

Graduate work is offered by the department in History, Drawing, Construction and Architectural Design. Courses and hours will be arranged to fit individual requirements. The graduate in architecture or architectural engineering working toward the master's degree will major in design and take additional courses in architecture or engineering construction sufficient to total eighteen credit hours.

One or more of the fellowships offered by the college to promote graduate study and amounting to two hundred and fifty dollars per annum, are open to graduates of this department or those of other collegiate schools of architecture of equal grade. The holders are required to assist with instruction work in the department.

SCHOOL OF PHARMACY

PHARMACY

Professor Blake
Assistant Professor Gentry

The School of Pharmacy is a member in good standing of the American Conference of Pharmaceutical Faculties.

Three courses are offered—the two-year course leading to the degree *Graduate in Pharmacy*; the three-year course leading to the degree *Pharmaceutical Chemist*; and the four-year course leading to the degree *Bachelor of Science in Pharmacy*.

The practical work in pharmacy includes the manufacture of not less than two hundred pharmaceutical preparations and the compounding of not less than seventy-five prescriptions.

The work in pharmacognosy includes the study of more than 250 drugs, each of which the student is required to recognize by its physical and chemical properties, giving Latin name, common name, original habitat, constituents, medicinal action and dose.

201. PHARMACY.—Sem. 1.

Rec. 5.

Metrology; specific gravity; heat and applications of heat; fundamental operations of Pharmacy; apparatus used in Pharmaceutical processes; Pharmaceutical Arithmetic.

Professor Blake and Assistant Professor Gentry.

202. PHARMACY.—Sem. 2.

Rec. 2. Lab. 6.

Laboratory and lecture work in preparation of official and non-official galenicals, including the following classes of preparations: waters, spirits, liquors, mucilages, pills, elixirs, oleates, tinctures, etc.

Assistant Professor Gentry and Student Assistant

301. PHARMACY.—Sem. 1.

Rec. 3. Lab. 12.

Crude drugs, lectures, recitations, and practical work in identification. The student is expected to become familiar with the official Latin name, synonyms, habitat, definition, commercial varieties, and other important factors relating to all U. S. P. and N. F. drugs and many non-official drugs.

Professor Blake.

303. PHARMACEUTICAL CHEMISTRY.—Sem. 2.

Rec. 3.

A study of the official and non-official inorganic compounds, official title, chemical formula, reactions, description, identification, dosage, etc.

Assistant Professor Gentry.

304. PHARMACOGNOSY.—Sem. 2.

Rec. 4.

Pharmaceutical technique and manufacturing pharmacy; official and non-official galenical and chemical preparations; alkaloidal assay and pharmaceutical testing.

Professor Blake and Assistant Professor Gentry.

402. PHARMACY.—Sem. 2.

Rec. 2. Lab. 4.

Dispensing pharmacy and prescription laboratory. The compounding of 75 prescriptions taken from the files of retail pharmacies. Class work to accompany.

*Professor Blake.***403. PHARMACOGNOSY.**—Sem. 1.

Rec. 5.

The study of crude drugs. This course is a continuation of course 303. Both vegetable and animal drugs are considered.

*Professor Blake.***404. PRESCRIPTIONS AND INCOMPATIBILITIES.**—Sem. 1.

Rec. 3.

A study of the prescription; its form, dosage, method of compounding, types of incompatibilities.

*Assistant Professor Gentry.***405. UNITED STATES PHARMACOPEIA.**—Sem. 2.

Rec. 4.

This course is primarily a review intended to prepare the student for the State Board examinations. It covers all crude drugs; organic and inorganic chemicals, and preparations found in the U. S. P. and N. F.

*Professor Blake.***406. PHARMACOLOGY.**—Sem. 2.

Rec. 3.

The pharmaco-dynamics, materia-medica, therapeutics, and toxicology of animal, vegetable, and mineral drugs.

*Professor Blake.***407. FOOD AND DRUG ANALYSIS.**—Sem. 1.

Lab. 12.

A study of the composition and method of analysis of leading food products, such as vinegars, fats and oils, dairy products, canned fruits and vegetables, alcoholic liquors, candies, preservatives, etc.

*Professor Blake.***COURSES IN OTHER DIVISIONS**

For detailed information see description under other departments in this catalogue.

CHEMISTRY**101-2. GENERAL CHEMISTRY.**—Sem. 1 and 2.

Rec. 3. Lab. 0.

103-4. INORGANIC CHEMISTRY.—Sem. 1 and 2.

Rec. 0. Lab. 2.

205-6. QUALITATIVE ANALYSIS.—Sem. 1 and 2.

Rec. 1. Lab. 6.

307. QUANTITATIVE ANALYSIS.—Sem. 1.

Rec. 1. Lab. 3.

303-4. ORGANIC CHEMISTRY.—Sem. 1 and 2.

Rec. 2 and 3. Lab. 0.

210. ORGANIC CHEMICAL LABORATORY.—Sem. 2.

Rec. 1. Lab. 6.

414. TOXICOLOGY AND URINALYSIS.—Sem. 2.

Rec. 1. Lab. 3.

PHYSIOLOGY AND BACTERIOLOGY

(Veterinary Medicine)

101. HUMAN PHYSIOLOGY.—Sem. 1 and 2.

Rec. 2. Lab. 0.

222. BACTERIOLOGY.—Sem. 2.

Rec. 2. Lab. 4.

BOTANY AND ZOOLOGY**201-4. BOTANY.**—Sem. 1 and 2.

Rec. 2. Lab. 3.

101-2. ZOOLOGY.—Sem. 1 and 2.

Rec. 2. Lab. 2.

PHYSICS203-4. **PHYSICS.**—Sem. 1 and 2.

Rec. 3. Lab. 0.

205-6. **PHYSICS LABORATORY.**—Sem. 1 and 2.

Rec. 0. Lab. 2.

ACADEMIC101-2. **ENGLISH.**—Sem. 1 and 2.

Rec. 3. Lab. 0.

201-2. **ENGLISH.**—Sem. 1 and 2.

Rec. 2. Lab. 0.

103-4. **LATIN.**—Sem. 1 and 2.

Rec. 3. Lab. 0.

105. **PHARMACY LATIN.**—Sem. 1.

Rec. 3. Lab. 0.

101-3. **HISTORY.**—Sem. 1 and 2.

Rec. 2. Lab. 0.

101-2. **MATHEMATICS.**—Sem. 1 and 2.

Rec. 2. Lab. 0.

301-2. **GERMAN OR FRENCH.**—Sem. 1 and 2.

Rec. 3. Lab. 0.

401-2. **GERMAN OR FRENCH.**—Sem. 1 and 2.

Rec. 3. Lab. 0.

COLLEGE OF VETERINARY MEDICINE

VETERINARY MEDICINE

The Veterinary Medical Course embraces eight semesters or four years of specific work, and leads to the degree of Doctor of Veterinary Medicine. It was established to meet the demands of young men who desire to become educated veterinarians and for students who wish to prepare for the study of human medicine.

COURSE OF STUDY.

The four-year veterinary course students take two years of work in the department of animal husbandry and dairying; one semester of work in pharmacy; four semesters of work in the chemical department; one semester of work in botany, and one year's work in English.

The veterinary course is especially strong in practical laboratory work.

1. In anatomy the work of dissection is continued through the first, second and third years. Special stress is given to comparative anatomy of the horse, ox, sheep, swine, dog, cat, rabbit and poultry.

2. Clinical laboratory work is also required throughout the course. The clinical work comes six days in the week and the cases presented embrace mules, horses, cattle, sheep, dogs, poultry and hogs. The variety is such as to illustrate a large number of diseases, surgical operations, and therapeutic applications.

3. The physiological laboratory is supplied with apparatus for tests and experiments in physiology.

4. The laboratory for pathology, histology, and bacteriology is extensive and is fully fitted with the latest apparatus.

5. In chemistry and toxicology the students work in one of the best of chemical laboratories.

6. In pharmacy the students work in practical pharmacy for six hours a week for one semester. In this they learn to recognize, compound and dispense drugs.

7. The animal husbandry department affords ample facilities for practice in feeding and judging cattle, sheep, hogs, horses and mules.

8. The dairy department gives practical laboratory work in dairy operations and in handling and feeding dairy cattle.

9. The botanical department is well equipped and gives excellent opportunity for laboratory work in poisonous and medicinal plants.

10. The subjects in the course of study are such as are re-

quired in the leading veterinary colleges of America. The course meets the requirements of the American Veterinary Medical Association and the Bureau of Animal Industry and the United States Civil Service Commission. It is the aim to have the teaching staff meet the requirements of the best standards. The length of the course is four years of nine months each.

Graduates of the College of Veterinary Medicine are admitted by civil service examinations to the appointments in the service of the Bureau of Animal Industry of the United States Department of Agriculture and to the army, and also to membership in the American Veterinary Medical Association.

DESCRIPTION OF COURSES.

101. PHYSIOLOGY.—Sem. 1 and 2.

Rec. 2. Lab. 0.

The students in all of the pharmacy courses, in the course in chemistry and metallurgy, in the course in veterinary medicine, and in the course in agriculture (Optional)—all study elementary physiology. The aim of this course is to teach anatomy, histology, hygiene, sanitation and physiology. The instruction is given by lectures, demonstrations and textbook.

Doctor Covington.

102. VETERINARY SCIENCE.—Sem. 1 and 2.

Rec. 2. Lab. 3.

This work is given to juniors in animal husbandry and is elective for all agricultural courses. The aim of the work is to teach how to prevent diseases on the farm by proper handling, feeding, working, housing and yarding farm animals. The ways and means of disinfecting, cleaning and keeping animals under proper sanitary conditions are also considered.

Doctor McAdory.

103. GENERAL CHEMISTRY AND CHEMICAL LABORATORY.—Sem. 1 and 2.

Rec. 3. Lab. 6.

See general chemistry 101-2 and 205-6.

Assistant Professor Martin.

104. ENGLISH COMPOSITION AND LITERATURE.—Sem. 1 and 2

Rec. 3. Lab. 0.

See English 101-102.

105. ANATOMY.—Sem. 1 and 2.

Rec. 0. Lab. 8.

Consists chiefly of dissection with quizzes and reviews. It embraces during the year (a) Osteology, a study of the bones; (b) Arthology, a study of the articulations; (c) Myology, a study of the structure, form and relations, attachments and functions of muscles.

106. HISTOLOGY.—Sem. 1.

Rec. 4. Lab. 8.

The course treats of the microscopic anatomy of the body, and includes fixing, imbedding, sectioning, mounting, staining and microscopic study of the cellular and inter-cellular structure of tissues. It is taught by lectures, textbooks and laboratory work.

Doctor Sugg.

107. JUDGING SHEEP, DAIRY AND BEEF CATTLE.—Sem. 1. Rec. 1. Lab. 2.

Study and judging of the types and breeds of sheep and beef cattle.

Professors Grimes and Burns.

108. JUDGING HORSES, MULES AND SWINE.—Sem. 2. Rec. 2. Lab. 2.

Lectures and practical exercises in judging the various breeds and classes of horses, mules and swine.

Professor Grimes and Assistant Professor Burns.

109. EMBRYOLOGY.—Sem. 2. Rec. 3. Lab. 2.

A study of the development of the embryo in its various stages and is designed to prepare students for the study of the principles of breeding and obstetrics.

Doctor McAdory.

110. BOTANY.—Sem. 2. Rec. 2. Lab. 4.

It consists in the specific study of how to recognize with the naked eye poisonous and medicinal plants.

Assistant Professor Johnstone.

111. CLINICS.—Sem. 1 and 2. Rec. 0. Lab. 3.

A general polyclinic.

Doctors Cary and McAdory.

214. ORGANIC CHEMISTRY.—Sem. 1. Rec. 3. Lab. 0.

A study of organic compounds; special reference to fats, carbohydrates and proteins in their relation to the life processes of plants and animals.

Professor Miller.

215. PHYSIOLOGICAL CHEMISTRY.—Sem. 2. Rec. 3. Lab. 0

The chemistry of serums, globulins, proteids, and other organic compounds found in plants and animal bodies.

Professor Miller.

216. PHARMACY.—Sem. 2. Rec. 2. Lab. 6.

The physical and chemical characters of drugs, preparation of official drugs and the compounding of prescriptions employed in veterinary practice.

Professor Blake.

217. VETERINARY PHYSIOLOGY.—Sem. 1. Rec. 3. Lab. 4.

Sem. 2. Rec. 2. Lab. 0.

A study of normal actions or functions of secretions, tissues, organs and apparatus of the bodies of domestic animals in health.

Doctor Covington.

218. ANATOMY.—Sem. 1 and 2. Rec. 0. Lab. 10.

A study of (a) internal organs; (b) blood vessels, heart, lymph vessels and glands; (c) the nervous system; (d) special sense organs; (e) genito-urinary organs; (f) the foot; (g) the larynx.

Doctor McAdory.

219. VETERINARY MEDICINE.—Sem. 2. Rec. 3. Lab. 0.

A study of the special pathology, etiology, symptoms, diagnosis, prognosis, and treatment of internal diseases of horses and mules.

Doctor Ferguson.

- 220.—CLINICS.—Sem. 2. Rec. 0. Lab. 8.

The course takes up the practical and laboratory methods of making a clinical diagnosis of the various surgical and internal diseases of domestic animals. All cases are examined, studied and recorded by the students.

Doctors Cary, McAdory, Ferguson, Covington and Sugg.

221. BACTERIOLOGY.—Sem. 1 and 2. Rec. 2. Lab. 4.

A study of the pathogenic bacteria, their classification, reproduction, cultural and staining characters, their products and methods of causing diseases.

Doctor Sugg.

222. OBSTETRICS.—Sem. 1.

Rec. 4. Lab. 0.

A study of the normal and diseased conditions of domestic animals during pregnancy.

Doctor McAdory.

323. SURGERY.—Sem. 2.

Rec. 4. Lab. 0.

General and special surgery of domestic animals.

Doctor Cary.

324. ANATOMY.—Sem. 1 and 2.

Rec. 0. Lab. 8.

The comparative anatomy of the (a) ox; (b) sheep; (c) swine; (d) dog; (e) cat; (f) poultry.

Doctor McAdory.

325. VETERINARY MEDICINE.—Sem. 1.

Rec. 5.

Sem. 2.

Rec. 3.

A study of the internal diseases of (a) cattle; (b) sheep and goats (c) swine; (d) dog.

Doctor Ferguson.

326. TOXICOLOGY AND URINALYSIS.—Sem. 2.

Rec. 2. Lab. 4.

A study of the actions of poisons on animals and the chemical tests for poison and the methods of making chemical analyses of urine.

Assistant Professor Marsh.

327. PARASITES.—Sem. 1.

Rec. 3. Lab. 2.

The course deals with the animal and plant parasites that infest man and animal. The anatomy, classification, modes of life, life history, the mechanical nutritional and toxic effects on hosts, etc. are studied. Specimens are collected, classified mounted or preserved.

Doctor Cary.

328. INFECTIOUS DISEASES.—Sem. 2.

Rec. 3. Lab. 0.

A study of the causes, modes of transmission, methods of diagnosis and prevention of infectious diseases of animals.

Doctor Ferguson.

329. SHOEING.—Sem. 2.

Rec. 2. Lab. 2.

It consists of a study of normal and pathological shoeing of horses, mules and cattle.

Doctor Covington.

330. PATHOLOGY.—Sem. 1.

Rec. 3. Lab. 6.

A study of the cellular and inter-cellular changes that occur in the various diseases of animals. Microscopic and macroscopic examinations are made of diseased organs, cells, tissues and liquids.

Doctor Sugg.

331. CLINICAL DIAGNOSIS.—Sem. 1.

Rec. 2. Lab. 2.

The physical and laboratory methods of making a clinical diagnosis of the various diseases of animals.

Doctor Covington.

332. CLINICS.—Sem. 1 and 2.

Rec. 0. Lab. 10.

The work consists of examinations, surgical and therapeutical applications of diseased animals in the hospital and at the polyclinic.

Doctors Cary, McAdory, Sugg, Ferguson and Covington.

431. THERAPEUTICS.—Sem. 1 and 2.

Rec. 3. Lab. 0.

A study of all the materials used in diseases and takes up the action of these materials or drugs in health and in diseases. It also considers the use of drugs in diseases.

Doctor Ferguson.

432. SURGERY.—Sem. 1 and 2.

Rec. 3. Lab. 0.

The work embraces surgical operations and diseases of the various domestic animals and includes a study of lameness and foot diseases.

*Doctor Cary.***433. VETERINARY MEDICINE.**—Sem. 1.

Rec. 3. Lab. 0.

A study of the internal diseases of the (a) cat; (b) poultry; (c) rabbits.

*Doctor Ferguson.***434. SURGICAL EXERCISES.**—Sem. 2.

Rec. 2. Lab. 3.

It consists of a series of surgical operations for the purpose of teaching the student the science and the art of surgery.

*Doctors Cary and McAdory.***435. MEAT INSPECTION.**—Sem. 1.

Rec. 3. Lab. 2.

A study of the ante-mortem and post-mortem conditions found in healthy and diseased animals. It embraces lectures, textbook work and actual meat inspection in a well built and equipped slaughter house.

*Doctors Cary, Covington and Winters.***436. MILK INSPECTION.**—Sem. 2.

Rec. 3. Lab. 2.

A study of diseases of dairy cattle, filth, bacteria and adulterants of milk; feed, water supply, dairy barns, pens and pastures; dairy cans, buckets, wagons, sterilizers, pasteurizers, milk houses and milkers.

*Doctors Sugg and Cary.***437. BREEDING.**—Sem. 2.

Rec. 2. Lab. 0.

The principles and practices involved in the improvement of domestic animals. The subjects of reproduction, variation, selection, heredity, etc., are considered in relation to practical breeding problems.

*Professor Grimes.***438. DAIRYING.**—Sem. 1.

Rec. 1. Lab. 2.

A study of the secretion, character, composition of milk; the proper handling of milk and cream and butter; and the correct methods for keeping dairy products pure and clean. Students are taught how to use the Babcock test, the lactometer, to test for acidity in milk, for adulterants and impurities in milk. They are also, taught how to make butter, standardize milk and cream and operate cream separators and other dairy equipment.

*Associate Professor Eaton.***439. FEEDING.**—Sem. 1.

Rec. 3. Lab. 0.

A study of the food requirements of different animals; includes calculations and mixing of rations, etc.

*Professor Grimes and Assistant Professor Burns.***440. CLINICS.**—Sem. 1 and 2.

Rec. 0. Lab. 10.

Special and polyclinical cases in surgery, internal medicine, infectious diseases, lameness, etc., are included in this work.

*Doctors Cary, McAdory, Ferguson, Sugg and Covington.***441. THESIS.**—Sem. 1 and 2.

Rec. 0. Lab. 4.

Every senior student develops a thesis upon some veterinary subject, and it must contain some original investigation.

Doctors Cary, Sugg, Covington and McAdory.

SIX-YEAR COURSE LEADING TO B. S. AND D. V. M. DEGREES

Freshman: Regular course in agriculture.

Sophomore: Substitute veterinary botany for agricultural botany, second semester, and physiological chemistry for agricultural chemistry, second semester.

Junior and Senior electives:

SUBJECT	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Human Physiology -----	2	0	2	0
Veterinary Physiology -----	2	4	2	0
Veterinary Science -----	2	3	2	3
Freshman Anatomy -----	0	10	0	8

In addition the required animal husbandry electives must be taken.

After finishing the animal husbandry course in four years, the student can complete the veterinary medical course in two years.

REGISTER

MILITARY ORGANIZATION

SESSION 1920-1921

RESERVE OFFICERS' TRAINING CORPS

PRESIDENT

SPRIGT DOWELL

COMMANDANT AND PROFESSOR OF MILITARY SCIENCE AND TACTICS
MAJOR ISAAC SPALDING, F. A.

ASSISTANT PROFESSOR OF MILITARY SCIENCE AND TACTICS
CAPTAIN L. J. ERLER, INFANTRY

ASSISTANT PROFESSOR OF MILITARY SCIENCE AND TACTICS
CAPTAIN L. D. CLAY, CORPS OF ENGINEERS

SUPPLY OFFICER AND ASSISTANT PROFESSOR OF MILITARY SCIENCE
AND TACTICS
CAPTAIN L. J. FORTIER, F. A.

INSTRUCTORS OF ENGINEERS

WARRANT OFFICER TEDDY LANGLAIS, U. S. A.
MASTER SERGEANT CHARLES W. SMITH

INSTRUCTORS OF FIELD ARTILLERY

FIRST SERGEANT GEORGE MOXHAM
SERGEANT RALPH L. EDWARDS
SERGEANT WILLIAM P. WADE
SERGEANT MALCOLM A. CREEK

INSTRUCTORS OF INFANTRY

FIRST SERGEANT EUGENE D. CALHOUN
SERGEANT CHANDLER P. MILLER
SERGEANT LUTHER R. HINDS

SURGEON

DOCTOR J. H. DRAKE

REGIMENTAL STAFF

Cadet Colonel J. Cornelius O'Neal.
Cadet Lieutenant Colonel J. M. Brown.
Cadet Captain J. E. Wideberg, Inspector of Pistol Practice.
Cadet Captain C. N. Johnston, Inspector of Rifle Practice.
Cadet Captain J. Vernon, Adjutant.

REGIMENTAL NON-COMMISSIONED STAFF

Cadet Sergeant Major J. L. Letcher.

INFANTRY UNIT

Cadet Major H. B. Barks.
Cadet Captain J. C. Hare, Battalion Adjutant.
Cadet Battalion Sergeant Major W. B. Dowell.
Cadet Battalion Supply Sergeant D. W. Robertson.
Cadet Color Sergeants L. E. McMillan and M. C. Cobb.
Cadet Color Corporals C. P. Scarborough and F. H. McCarley.

CADET CAPTAINS

Company "A"	Company "B"	Company "C"	Company "D"
R. E. Rutledge	B. N. Bryan	R. H. Copeland	A. H. Lisenby

CADET FIRST LIEUTENANTS

E. B. Seale	W. H. Winton	P. H. Hardie	J. W. McFall
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CADET SECOND LIEUTENANTS

G. B. Wilkes	F. M. Barnett	H. O. Holstun	W. S. Hollingsworth
A. L. Hayley	E. A. Wilkinson	P. I. Lowman	D. M. Dowdell

CADET FIRST SERGEANTS

C. F. Floyd	W. T. Mellen	W. B. Duncan	C. H. Snuggs
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CADET SERGEANTS

H. L. Biggin	R. C. Christopher	G. J. Hornsby	T. W. Coleman
C. Floyd	J. F. Cooper	J. D. Haynie	H. B. Helms
W. H. Appleton	R. B. Draughon	O. F. Howe	E. T. Lee
H. Holstun	E. A. Terry	W. H. Henderson	H. G. Spurlock

CADET CORPORALS

I. L. Knox	W. B. Grisham	J. T. Straiton	C. L. Redd
D. L. McDavid	J. M. Gillispie	J. F. Tribble	H. B. Moses
D. C. Adams	J. C. O'Neal	F. S. Mosley	M. G. Bonner
J. A. McLennan	V. A. Smith	R. P. Nicholson	J. K. Hodnette
T. H. Sills	O. E. Waller	C. H. Lamar	L. B. Sledge
G. R. Purifoy	A. L. Welden	L. P. Botta	G. T. Turnipseed

FIELD ARTILLERY UNIT STAFF

Cadet Major H. L. Hahn

Cadet Captain H. S. Fullwood, Adjutant

Cadet First Lieutenant W. L. Barker, Reconnaissance Officer

NON-COMMISSIONED STAFF

Cadet Battalion Sergeant Major W. F. Williams

Cadet Color Sergeant N. G. Camp

CADET CAPTAINS

Battery "A"
O. W. NeelBattery "B"
C. E. ReidBattery "C"
E. W. Sartain

CADET FIRST LIEUTENANTS

M. R. Barker
E. F. DarbyL. W. Crane
H. W. StovesM. N. Walker
J. A. Holland

CADET SECOND LIEUTENANTS

R. W. House
L. L. PetersonJ. B. Rogers
N. W. Mandy

J. F. Arnall

CADET FIRST SERGEANTS

J. W. Matthews

E. B. Weedon

A. B. Dunwoody

CADET SERGEANTS

J. H. Kinzer
A. Pow
R. C. Sampley
J. LawrenceL. J. Hillman
S. M. Boykin
T. Neely
R. L. Pulley
D. WendelS. A. Spencer
J. R. Bradley
E. D. Cumming
H. A. Gardner
H. Orr
C. F. Reynolds

CADET CORPORALS

F. W. Jenkins
C. P. Cook
R. T. Porter
J. O. Taylor
L. NewmanC. H. Johnson
H. J. Phillips
H. M. Smith
M. V. TurnerJ. A. Harrison
H. Stringfellow
Z. Savage

ENGINEER UNIT

Cadet Captain A. O. Taylor

Cadet First Lieutenant A. D. Boyd

Cadet Second Lieutenant B. B. Stokes

Cadet First Sergeant J. O. Jackson

Cadet Supply Sergeant J. M. Acker

CADET SERGEANTS

J. D. Feagin
J. M. Hunnicutt

E. Keenon

A. R. Harvey

CADET CORPORALS

J. C. Bailey
A. G. Bennet
G. W. Ward
M. P. RobinsonC. B. Lynch
J. F. Holt
V. G. GloverE. L. Beasley
J. D. Roberson
J. W. Lindsley

THE AUBURN BAND

Session 1920-1921

P. R. Bidez, Bandmaster.

J. M. Linx, Instructor.

W. L. Riley, Chief Musician.

G. B. Warren, Prin. Musician.

J. M. Hunnicutt, Drum Major.

MUSICIANS

W. T. Abbot	-----Trombone	M. E. Lasater	-----Alto Horn
J. C. Bailey	-----Clarinet	J. M. Linx	--Piccolo and Flute
P. P. Barry	-----Cymbals	J. H. McKinley	-----Clarinet
A. H. Britt	-----Saxophone	W. H. Mandy	-----Trombone
T. H. Bethume	-----Cornet	T. E. Martin	-----Drums
W. B. Belcher	-----Clarinet	A. E. Meek	-----Cornet
W. J. Carr	-----Cornet	W. C. Middleton	-----Drums
L. M. Chambliss	-----Clarinet	W. L. Riley	-----Saxophone
A. O. Festorazzi	----B. Drum	G. D. Pollock	-----Cornet
L. L. Denson	-----Tuba	A. H. Speigner	----Trombone
J. W. Dennis	-----Trombone	H. K. Stephenson	Saxophone
W. T. Hale	-----Trombone	B. H. Swango	-----Clarinet
L. P. Hodges	-----Tuba	B. L. Ward	-----Clarinet
W. W. Foster,	-----Cornet	F. D. Warren	----Saxophone
J. H. Jackson	-----Cornet	G. B. Warren	----Saxophone
A. F. Kelly	-----Euphonium	U. V. Whipple	----Alto Horn
W. T. Wood	-----Cornet		

GRADUATES

CLASS OF 1920

HONORS

Members of the Senior Class who attain distinction with grade of 95 per cent are Graduates with Highest Honor. Those who attain a distinction with a grade of 90 per cent. and less than 95 are Graduates with Honor. Those who attain less than 90 per cent. and more than 60 per cent are Graduates.

DEGREES

BACHELOR OF SCIENCE

Avery, William Henry	----- Agr. (An. Husb.)	----- Marion
Beasley, Robert Marion	----- General	----- Lee
Bird, Mafus	----- Agr. (An. Husb.)	----- Marengo
Bonner, Thomas Herbert	----- Agr. (An. Husb.)	----- Clay
Brice, Warren Calvin	----- Chem. Eng.	----- North Carolina
Caldwell, Hamlin Alexander	----- Chem. & Met.	----- Jackson
Calhoun, Fred William	----- Mining Eng.	----- Jefferson
Cammack, William Alfred	----- Agr. (An. Husb.)	----- Clarke
Carlovitz, Giles Homer	----- Elec. Eng.	----- Mississippi
Chambers, Raymond Austin	----- Architecture	----- Limestone
Clark, George Little	----- Agr. (An. Husb.)	----- Marengo
Cooper, George Samuel	----- Agr. (An. Husb.)	----- Lee
Crain, Desmond	----- Mech. Eng.	----- Wilcox
Crain, Warren	----- Mech. Eng.	----- Wilcox
Crow, Osler Gilbert	----- Elec. Eng.	----- St. Clair
Crymes, Marvin Trowbridge	----- General	----- South Carolina
Dent, Stuart Hubert	----- Elec. Eng.	----- Barbour
Eberhardt, Marguerite Anna	----- General	----- Dallas
Edwards, Charles Wesley	----- General	----- Coffee
Farned, Gordon	----- Agr. (An. Husb.)	----- Franklin
French, William Williams	----- Agriculture	----- Jefferson
Fuqua, Benjamin Bradley	----- Mech. Eng.	----- Lauderdale
Gardner, Junius Roach, Jr.	----- Chem. & Met.	----- Jefferson
Genius, Henry Stanley	----- Elec. Eng.	----- Louisiana
Gray, Charles Merrill	----- Elec. Eng.	----- Walker
Gunter, Isham Belle	----- Chem. Eng.	----- Lee
Gunter, Lindsey Jesse	----- Chem. Eng.	----- Lee
Hall, Jesse Pankey	----- Chem. & Met.	----- Etowah
Hall, William Robert	----- Chem. Eng.	----- Jefferson
Halsey, William Stephenson	----- General	----- Colbert
Harper, Sidney Guenveur	----- Mech. Eng.	----- Montgomery
Harvey, Ernest Westcott	----- Mech. Eng.	----- Montgomery
Head, Oliver Ripley	----- Civ. Eng.	----- Shelby
Hearn, William Caesar	----- Elec. Eng.	----- Macon
Howarth, John Monroe	----- Elec. Eng.	----- Chambers
Jacobs, Clint	----- Animal Husbandry	----- Coosa
Jimmerson, Jerry Leslie	----- Mech. Eng.	----- Lee
Johnson, Neal Corbly	----- Elec. Eng.	----- Colbert
Johnson, Reuben Lee	----- Agr. Education	----- Tallapoosa
Keller, Hanson Stakely	----- Chem. & Met.	----- Jefferson
Leach, Howard Stuart	----- Chem. Eng.	----- Montgomery
Leonard, Frank Underwood	----- Chem. Eng.	----- Jefferson
Lipscomb, Andrew Dowdell	----- Chem. & Met.	----- Lee

Lisenby, Albert Shelton	General	Houston
McLane, Jesse Newman	General	Florida
Maddox, Fontain Alexander	General	St. Clair
Martin, Robert Lee	Agr. (An. Husb.)	Jefferson
Meigs, Archie Vernon	Chem. Eng.	Tallapoosa
Miller, Amos Bender	Chem. Eng.	Cullman
Moon, Jacob Robert	General	Coosa
Morgan, Frank Stewart	Mech. Eng.	Dallas
Nelson, Oscar Albin	Mech. Eng.	Jefferson
Oliver, James McCarty	Elec. Eng.	Jefferson
Owsley, Winfield Scott	Pharmacy	Elmore
Pearson, Gerald Walstein	Mech. Eng.	Georgia
Pilcher, James Byrd	Chem. Eng.	Houston
Riddell, Glenn Ernest	Agr. (An. Husb.)	Tennessee
Rigby, Hugh Balsham	Elec. Eng.	Georgia
Risen, Adam Olin	Animal Husbandry	Jefferson
Salter, Roy Lester	Chem. & Met.	Jefferson
Samford, William James	General	Lee
Shaver, Arthur	Chem. Eng.	Cullman
Sims, Edwin Huson, Jr.	Mech. Eng.	Georgia
Snuggs, William Elbert	General	Randolph
Storrs, Charles Paddock	Agr. (An. Husb.)	Elmore
Stubbs, Francis Seaborne	Chem. & Met.	Georgia
Tamblyn, Jack	Agr. (An. Husb.)	Jefferson
Thomas, Joe	Civ. Eng.	Tallapoosa
Todd, Edward Hofford	Chem. Eng.	Jefferson
Walker, Harold	General	Jefferson
Watson, Lynn Casey	Mech. Eng.	Jefferson
Williamson, Allen Davidson	Agr. (An. Husb.)	North Carolina
Wright, Leonard Rudolph	Mech. Eng.	Georgia
Young, Calvin Locke	Elec. Eng.	Texas

GRADUATES WITH HONOR

Bedingfield, Charles Herschel	Agr. (An. Husb.)	Lauderdale
Boyd, Jacob Murphree	Civ. Eng.	Pike
Bradley, Thomas Lyons	Agr. (An. Husb.)	Jefferson
Bridges, Omar Wesley	Agr. (An. Husb.)	Macon
Burton, Joseph Chandler	Chem. Eng.	Shelby
Culpepper, Edward Pilate	Elec. Eng.	Henry
English, Lester Lamar	Agr. (An. Husb.)	Jefferson
Floyd, Charles Ewell	Chem. Eng.	Lee
Foster, George Lunsford	Agr. (An. Husb.)	Lee
Foster, James Douglas, Jr.	Agr. (An. Husb.)	Lee
Gaines, Robert Callaway	Agr. (An. Husb.)	Clay
Hanna, Verner Cyril	Civ. Eng.	Lee
Howle, Milton Oliver	Mech. Eng.	Jefferson
Kernachan, John Simmons	Mech. Eng.	Lauderdale
Kyser, Melton Winship	Elec. Eng.	Jefferson
Lauderdale, Arthur Armon	Agr. (An. Husb.)	Marion
LeBron, Lamar Cantelou	Agr. (An. Husb.)	Elmore
McArthur, Walter Littleton	Agr. (An. Husb.)	Geneva
Martin, Alfred Shelby	Elec. Eng.	Jefferson
Perdue, Marvin Lucian	Architecture	Coffee
Phillips, Sidney Clark	Agr. (Horticulture)	Mobile
Sturkie, Dana Gibson	Agr. (An. Husb.)	Lee
Trotter, Joseph Pierce	Civ. Eng.	Baldwin
Turner, Roy Hope	General	Tallapoosa

Wideberg, Carl Eric, Jr.	Civ. Eng.	New Jersey
Williams, Gilmore Clark	Agr. Education	Cullman
Wood, Allen Killebrew	Elec. Eng.	Jefferson
Wood, George Raymond	Elec. Eng.	Baldwin
Woodall, Aaron Montgomery	Chem. Eng.	St. Clair

GRADUATES WITH HIGHEST HONOR

Brown, Lyle	Agr. (Horticulture)	Choctaw
Dowling, Angus Mancill	Elec. Eng.	Barbour
Evans, Lecil Verland	General	Lamar
Kimbrough, William Duke	Agr. (Horticulture)	Kentucky
Lancaster, Edwin Bragg	Architecture	Sumter
Sizemore, Claude	Mech. Eng.	Fayette

DOCTOR OF VETERINARY MEDICINE (D. V. M.)

Fuqua, William Asker	Barbour
Murray, John Herbert	Lee
Neal, William Albert, Jr.	Cleburne
Possein, Staton G.	Baldwin
Roberts, Rufus Arnold	Randolph
Smith, William Lee	Jefferson

GRADUATES IN PHARMACY (Ph. G.)

Armstrong, Fred	Cullman
Burks, Bennett Huffman	Coosa
Feagin, Eugene Lloyd	Wilcox
Fowler, William Gerard	Montgomery
Ginn, Reuben E.	St. Clair
McCall, William Charles	Cuba
Plant, Reuben Jackson	Tallapoosa
Ray, Ped	Covington
Seibold, Jessie	Marshall
Seibold, Viola	Marshall
Threadgill, Selman Lamar	Dallas

POST GRADUATE DEGREES

MASTER OF SCIENCE

Boyd, Howard Milton	Kentucky
Pollard, Elisha Frederick	Crenshaw

PROFESSIONAL DEGREE IN COURSE

CIVIL ENGINEER

Chambers, Thomas Browning	Limestone
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DEGREES FOR PROFESSIONAL WORK

ELECTRICAL ENGINEER

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Stauffer, Edwin Ray	California

CIVIL ENGINEER

Skeggs, John Hunt	California
Ticknor, William Stewart	Montgomery

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Darby, Edward Fletcher	Jefferson
Dowdell, Madie	Lee
Dunn, Clyde	Lamar
Easter, Everett Champie	Limestone
Fuller, Melville Gray	Madison
Gottlieb, Jacob	Jefferson
Hardie, Phillip Henry	Jefferson
Miller, George Knox	Florida
Patterson, Frederick Davis, Jr.	Georgia
Reed, Russell Sage	Etowah
Reid, Syrus Eugene	Montgomery
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Smith, Charles Linton	Fayette
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Harrison, James Alexander	Birmingham
Hodnette, John Koga	Macon
Holt, James Fannin	Montgomery
Lawrence, James Driskell	Dallas
Looney, John Burrow	Tennessee
McMillan, Lauchlin Emerson	Bullock
Mead, Daniel Lewis	Dallas
Moore, Byrd Lee, Jr.	Dallas
Orr, Herman	Houston
Pippin, Robert Roy, Jr.	Ozark
Sampley, Roy Cheasler	Georgia
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Spratling, Sarah Augusta	Virginia

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Carr, William Jolley	Montgomery
Davis, Pleasber Newton	Tallapoosa
Espy, Herbert Otto	Houston
Ford, John William, Jr.	Hale
Foster, Joseph Eugene	Montgomery
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Gardner, Louis Wright	Lee
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Kahn, Herbert Rosenberg	Montgomery
Keller, Charles Spurgeon	Cullman
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LaCroix, Charles Adolphus, Jr.	Jefferson
LeSueur, Clarence Preston	Lee
Lindsley, John Williams	Tennessee
Nettles, Jack Finklea	Monroe
Pearce, James Gibson	Marion
Redd, Carl Leitner	Bullock
Saunders, Charles Richard	Florida
Savage, Zack	Pickens
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McIlvaine, Victor Caryl	Florida
Spalding, Branch	Virginia

CATALOGUE OF STUDENTS

SESSION 1920-21

GRADUATE STUDENTS

Hanna, Verner Cyril	Civ. Eng.	Auburn
Pearson, Gerald Walstein	Mech. Eng.	Devereaux, Ga.
Pilcher, James Byrd	Chem. Eng.	Dothan
Stubbs, Francis Seaborne	General	Douglas, Ga.

SENIOR CLASS

Acker, Joe Morris	Chem. Eng.	Gadsden
Anderson, Charles Carlisle	Agronomy	Prospect
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Barker, Wyss Leo	Chem. Eng.	Auburn
Barks, Herbert Bernard	Chem. Eng.	Birmingham
Barnes, Samuel Thomas, Jr.	General	Mobile
Barnett, Frank Madison	Agronomy	Fitzpatrick
Bartee, Homer Gray	Elec. Eng.	Cordele, Ga.
Bell, Almarion Devalco	Agronomy	Alpine
Bell, Franklyn Evelyn	Elec. Eng.	Pensacola, Fla.
Biggin, Harold Lyle	Elec. Eng.	Auburn
Biwins, Daniel Eugene, Jr.	Elec. Eng.	Bartow, Fla.
Boyd, Alfred DeWitte	Civ. Eng.	Auburn
Bradley, Charles Henry	Elec. Eng.	Mobile
Bradley, James Thomas	Animal Husbandry	Blacksher
Brown, John Morgan	Chem. Eng.	Auburn
Brown, Robert Crawford	General	Ensley
Bryan, Bert Nathan	Horticulture	Marshallville, Ga.
Buchanan, James Lake	Elec. Eng.	Riverton
Bullard, Bartow	Agronomy	Elba
Bullock, John Kavanaugh	Animal Husbandry	Montgomery
Burke, Henry Bernard	Mech. Eng.	DeFuniak Springs, Fla.
Burleson, Benjamin Z.	Vet. Med.	Hackleburg
Byrd, William Fitzhugh	Agronomy	Birmingham
Camp, Norman Glenn	Elec. Eng.	Senoia, Ga.
Caton, Noah Winston	Mech. Eng.	River Falls
Christopher, Ralph Coleman	Animal Husbandry	Isney
Collins, Albert Hamilton	Agr. Education	Covin
Cook, Samuel Clarence	Agr. Education	Camden
Cooper, John Francis, Jr.	Animal Husbandry	Echola
Copeland, Rodney Hugh	Mech. Eng.	Auburn
Crane, Lawrence Welch	Elec. Eng.	Birmingham
Creel, John Paul	Agr. Education	Morris
Croll, Samuel Donovan	Animal Husbandry	Aliceville
Darby, Edward Fletcher	Mech. Eng.	Birmingham
Davis, Clifford Gilmore	Civ. Eng.	San Benito, Tex.
Deck, Herman Hoover	Agronomy	Guntersville
DeShazo, Albert Perry	Mech. Eng.	Birmingham
Dowdell, David Merrick, Jr.	Horticulture	Wimauma, Fla.
Dowdell, Madie	General	Auburn
Drake, Rosa	General	Auburn
Duboise, Thomas	Agr. Education	Phil Campbell
Dunn, Clyde	Agr. Education	Millport
Easter, Everette C.	Animal Husbandry	Coxey
Eppes, William Cornelius	Mech. Eng.	Dayton
Feagin, Joel Daniel	Civ. Eng.	Union Springs

Festorazzi, Angelo Otto	Mech. Eng.	Mobile
Fuller, Melville Gray	Elec. Eng.	Huntsville
Fullwood, Harry Sisson, Jr.	Elec. Eng.	New York, N. Y.
Garland, Peter Joseph	Animal Husbandry	Jones
Gottlieb, Jacob	Mech. Eng.	Birmingham
Greene, Virgil Roy	Agr. Education	Arley
Griggs, Alfred Flournoy	Elec. Eng.	Birmingham
Hahn, Herbert Louis	Mech. Eng.	Birmingham
Handley, Levis Wilson	Chem. & Met.	Lineville
Hardeman, Harriet Currie	General	Auburn
Hardie, Philip Henry	Mech. Eng.	Birmingham
Hare, Joseph Crosland	Chem. Eng.	Auburn
Hatcher, William Wesley	Arch. Eng.	Auburn
Hawk, George Morton	Agr. Education	Nicholsville
Hayley, Arthur Lee, Jr.	Elec. Eng.	America
Hillman, Lyle Jarman	Elec. Eng.	Orrville
Hillman, Robert Charles	Agronomy	Orrville
Hodges, Linnie Pitt	Chem. & Met.	Dothan
Holland, Joseph Alfred	Civ. Eng.	Huntsville
Hollingsworth, William Strother	Agronomy	Edgefield, S. C.
Holloway, Albert Lee	Vet. Med.	Monroeville
Holstun, Hollis Oswald	General	Camp Hill
House, Ray Walthall	Elec. Eng.	Acmar
Hurlbert, James Daniel	Elec. Eng.	Cuba
Jacobs, Mose	Agr. Education	Birmingham
Jeffrey, Frank Inge	Agronomy	Lower Peach Tree
Johnson, Sidney Walton	Agronomy	Auburn
Johnston, Charles Nathan	Mech. Eng.	Sweetwater
Keenon, Edgar, Jr.	Mech. Eng.	Ensley
Komp, George Barnes, Jr.	Elec. Eng.	Hattiesburg, Miss.
Lamar, George Glenn	General	Auburn
Lee, Wilkie Hudson	Vet. Med.	Hayneville
Linx, Jack Marc	Chem. & Met.	Birmingham
Lisenby, Amsie Horton	Chem. Eng.	Dothan
Lovin, John Witty	Chem. Eng.	Decatur
Lowman, Pierre Ingram	Mech. Eng.	Orangeburg, S. C.
McFaden, Frank Sidney	Civ. Eng.	Montgomery
McFall, James William	Agr. Education	Anderson, S. C.
McKinley, John Henry	Animal Husbandry	Demopolis
Malone, Joseph Wheeler	Animal Husbandry	Birmingham
Mandy, Norman Wilfred	Mech. Eng.	Ensley
Mathews, Charles Lewis	Agr. Education	Mathews
Maury, James Fontaine, Jr.	Mech. Eng.	Spring Hill
May, James Warren	Vet. Med.	Mobile
Maynor, Eugene Allen	Animal Husbandry	Townley
Miller, George Knox	Elec. Eng.	Monticello, Fla.
Neel, Oliver W.	Mech. Eng.	Bearden, Ark.
Nixon, Hubert William	Chem. & Met.	Merrillton
Ollinger, Charles George	Chem. & Met.	Mobile
Ollinger, Rodney Matthews	Arch. Eng.	Mobile
O'Neal, James Cornelius	Mech. Eng.	Mobile
Page, Frank Penn	Chem. & Met.	Dothan
Palmer, William	Animal Husbandry	Ackerville
Patterson, Frederick Davis, Jr.	Vet. Med.	Cuthbert, Ga.
Peterson, Lyman Loomis	Elec. Eng.	Alexander City
Powell, Elwyn Nimmons	Mech. Eng.	Newnan, Ga.

Powell, John Stephen	Civ. Eng.	Newnan, Ga
Ray, Grover Washington	Agr. Education	Alexander Cit
Rayfield, Lee Rasberth	Chem. & Met.	Weogufk
Reed, Russell Sage	Elec. Eng.	Altoon
Reid, Cyrus Eugene	Elec. Eng.	Montgomer
Riley, William Leonard	Chem. Eng.	Birmingham
Roberts, Amos Dalton	Agr. Education	Fayette
Rogers, John Benjamin	Elec. Eng.	Birmingham
Rutledge, Robert Edgar	Chem. Eng.	Ensle
Sanborn, Edgar Franklin	Elec. Eng.	Americus, Ga
Sartain, Ezra Wilson	Elec. Eng.	Oakman
Seale, Eunice Brooks	Chem. Eng.	Moundvill
Shealy, James Wellington	Elec. Eng.	Enterpris
Simpson, William Gulley, Jr.	Agr. Education	Snow Hill
Sizemore, Emmett	Animal Husbandry	Guilford
Small, Ernest Gustave	Animal Husbandry	Mint
Smith, Charles Alstin	Elec. Eng.	Sylacaug
Smith, Charles Linton	Agr. Education	Covington
Smith, Robert McClure	Animal Husbandry	Pendleton, S. C
Speigner, Alex Hillary	Highway Eng.	Dothan
Spoon, LeRoy Page	Elec. Eng.	Charlotte, N. C
Spratling, William Philip	Architecture	Auburn
Stevenson, Will Allen	Animal Husbandry	Notasulga
Stokes, Benjamin Boulware, Jr.	Elec. Eng.	Birmingham
Taylor, Alexander Ogden	Civ. Eng.	Jacksonville, Fla
Terry, Edward Allison	Animal Husbandry	Millbrook
Tyler, Napoleon Bonaparte	Vet. Med.	Rich Square, N. C
Vaiden, James Winchester	Chem. Eng.	Uniontown
Vernon, John	Mech. Eng.	Birmingham
Wade, Allan Jackson	Elec. Eng.	Birmingham
Wade, James Dallas, Jr.	Elec. Eng.	Montgomer
Wadkins, Ross Franklin	Agr. Education	Opelika
Walker, Marion Newman	Horticulture	Clemson Col., S. C
Waller, George Elmer	Mech. Eng.	Auburn
Ward, Birma Leon	Pharmacy	Dothan
Warren, Chester Clyde	Civ. Eng.	Coal City
Warren, George Butler	Animal Husbandry	Albany
Watson, Luther Boardman	Elec. Eng.	Furman
Watt, Joseph Tee, Jr.	Animal Husbandry *	Auburn
Watts, Edgar Reid	Elec. Eng.	Oakman
Waugh, John Dayton	Animal Husbandry	Mathew
Whatley, John Louis	Animal Husbandry	Opelika
Whipple, Ulysses Virgil, Jr.	Horticulture	Cordele, Ga
Wideberg, John Eric	Arch. Eng.	Jamesburg, N. J
Wilkinson, Ernest Albert	Animal Husbandry	Autaugaville
Wilkinson, Edward Everett	Animal Husbandry	Thomasville
Williamson, Arthur Herbert	Animal Husbandry	Letohatchie
Williams, Homer Eaton	Agr. Education	Waterloo
Williams, Vester Vanderbilt	Animal Husbandry	Guilford
Wilson, Samuel Lee	Agr. Education	Double Springs
Winton, William Harman	Chem. Eng.	Greenville
Youngblood, Robert Wadkins	Agronomy	Dothan

JUNIOR CLASS

Abbott, William Thomas	Chem. Eng.	Birmingham
Adams, David Clopton	Elec. Eng.	Albany
Adams, Samuel Henderson	Pharmacy	Dothan
Anderson, Samuel Porter	Agriculture	Tusculumbia

Appleton, Wesley Howard	Agriculture	Collinsville
Bailey, Julian Clarke	Elec. Eng.	Demopolis
Banks, John Coleman	Agriculture	Eutaw
Barlow, William Wallace	Vet. Med.	Cochran, Ga.
Basore, Lucien Kellogg	Chem. Eng.	Birmingham
Beasley, Elliott Laney	Civ. Eng.	Jacksonville, Fla.
Bennett, Aubrey Graham	Elec. Eng.	Auburn
Blalock, James Crow	Mech. Eng.	Florence
Bonner, Moffatt Grier	Agriculture	Oak Hill
Boriss, Julian Ivandale	Civ. Eng.	Birmingham
Bowen, John Harold	Elec. Eng.	Five Points
Boykin, Samuel Marks	Elec. Eng.	Mobile
Bradley, John Robert	Architecture	Atmore
Breedlove, Frederick Wallace	Elec. Eng.	New Orleans, La.
Brown, David	Civ. Eng.	Pratt City
Cannon, Nahum Allen	Architecture	Birmingham
Chandler, Edward Montgomery	Chem. Eng.	Birmingham
Childree, Linney Leonidus	Civ. Eng.	Midland City
Cobb, Marion Clifton	Mech. Eng.	Geiger
Coleman, Thomas Wilkes	Mech. Eng.	Anniston
Combs, James Evans	Elec. Eng.	Fairfax
Cooke, Curtis Preston	Agriculture	Lisman
Cooper, Robert James	Elec. Eng.	Auburn
Cumming, Edwin Davis	Chem. Eng.	Louisville
Davis, Ennis Augustus	Vet. Med.	Thomasville, Ga.
Davis, Edmund Pearce	Mech. Eng.	Oak Grove
Davis, Richard Orrick	Civ. Eng.	Decatur
Denson, Leonidas Lycurgus	Vet. Med.	Bay Springs, Miss.
Dickinson, Jackson Miller	Elec. Eng.	Billingsley
Dobson, Frank Perry	Civ. Eng.	Sylacauga
Dowell, William Burton	General	Auburn
Draughon, Ralph Brown,	General	Geneva
Duncan, Wilton Burton	Elec. Eng.	Belle Mina
Dunwoody, Archibald Bullock	Mech. Eng.	Kirkwood, Ga.
Edge, Harvey Arnold	Agriculture	Buffalo
Everett, Edward	Vet. Med.	Mendenhall, Miss.
Fulghum, James Lavoisier	Agriculture *	Pensacola, Fla.
Funderburg, Claud Hawkins	Elec. Eng.	Birmingham
Gardner, Harmon Austin	Agriculture	Auburn
Glover, Vernon Joseph	Elec. Eng.	Quinton
Gulledge, Euclid Taylor	Agriculture	Tallassee
Haggard, Richard Lester	Agr. Education	Gadsden
Harlan, John Gilbert	General	Alexander City
Harrison, James Alexander	Elec. Eng.	Birmingham
Harvey, Addison Reese, Jr.	Civ. Eng.	Montgomery
Hatchett, Benjamin Franklin	Mech. Eng.	Athens
Haynie, Jack Duke	Agriculture	Auburn
Helms, Harlie Bee	Agriculture	Elba
Henderson, William Hobart	Chem. Eng.	Birmingham
Hodnette, John Koga	Mech. Eng.	Notasulga
Holstun, Harvey	Elec. Eng.	Waverly
Holt, James Fannin	Elec. Eng.	Montgomery
Howard, Curtis Samuel	Elec. Eng.	Union Springs
Howe, Orlando Fox	Agriculture	Montgomery
Jackson, Albert Clay	Chem. Eng.	Birmingham
Jackson, John O'Connell	Mech. Eng.	Montgomery

Jenkins, Fred Wesley	Elec. Eng.	Verbena
Jennings, Alton Claud	General	Langdale
Johnson, Charles Hanson	Mech. Eng.	Camp Hill
Johnson, John Walter	Mech. Eng.	Thorsby
Keith, Frederick Rulfs	Agriculture	Currie, N. C.
Kicklighter, James Fred	Elec. Eng.	Starke, Fla.
Kinzer, James Hanlin	Elec. Eng.	Sheffield
Lasseter, William Jackson, Jr.	Civ. Eng.	East Lake
Lawrence, James Driskell	Agriculture	Plantersville
Logan, James Thomas	Elec. Eng.	Rockford
Looney, John Burrow	Elec. Eng.	Winchester, Tenn.
Lynch, Charles Byrne	Mech. Eng.	Montgomery
McCarley, Frank Hollingsworth	Mech. Eng.	Buffalo
McCartha, Charles B.	Vet. Med.	Tallassee
McDavid, David Lanier	Elec. Eng.	Uriah
McGinty, Robert Heard	Agriculture	Camp Hill
McIlvaine, Victor Caryl	Elec. Eng.	Tampa, Fla.
McMillan, Lauchlin Emerson	Civ. Eng.	Inverness
Maddox, William Notley	Mech. Eng.	Easonville
Matthews, Joseph Walsh	Agriculture	Mobile
Mead, Daniel Lewis	Civ. Eng.	Selma
Mellen, William Tartt	Mech. Eng.	Livingston
Mendenhall, Walker Hamilton	Elec. Eng.	Ensley
Miller, Arthur Augustus	Vet. Med.	Nanafalia
Miller, Jesse Lokey	Vet. Med.	Columbus, Ga.
Mobley, Steven Douglas	Elec. Eng.	Columbus, Ga.
Montgomery, Robert Charles	Civ. Eng.	Warrior
Morris, Clifton Chambers	Mech. Eng.	Langdale
Moses, Henry Benton	Applied Elec.	Girard
Mosley, Frank Shackelford	Architecture	Montgomery
Muths, George Alwyn	Elec. Eng.	Mobile
Muths, Sherman Louis	Mech. Eng.	Mobile
Neely, Thomas	Elec. Eng.	Demopolis
Neighbors, Hugh Anderson	Vet. Med.	Goodwater
Nesbit, Arthur P'Pool	Elec. Eng.	Decatur
Newman, Leslie	General	Opelika
Nicholson, Rufus Percy	Pharmacy	Collinsville
O'Donnell, Claude Wainwright	Civ. Eng.	Sanford, Miss.
Orr, Herman	Civ. Eng.	Dothan
Phillips, Henry James	Elec. Eng.	Lisman
Pipkin, Bunyan	Agriculture	Lakeland, Fla.
Pippin, Robert Roy, Jr.	Agr. Education *	Ozark
Pollock, George Dean, Jr.	Elec. Eng.	Birmingham
Porter, Roy Thomas	Elec. Eng.	Hillsboro
Pow, Adam	Civ. Eng.	Birmingham
Proctor, W. Bryan	Agr. Education	Scottsboro
Pruett, Cyril Hugo	General	Mt. Dora, Fla.
Pulley, Robert Lackey	Elec. Eng.	Huntsville
Reagan, Frank Alexander	Vet. Med.	Delta
Reese, George Wright	Elec. Eng.	Pensacola, Fla.
Reynolds, Charles Frederick	Elec. Eng.	Clopton
Roberson, James Dee	Elec. Eng.	Haleyville
Robertson, Dickson Wharton	Elec. Eng.	Birmingham
Robinson, James Paul	Agr. Education	Gilbertown
Rose, Crawford Allen	Agriculture	Erath, La.
Russell, John Willard	Elec. Eng.*	Tampa, Fla.
Sampley, Roy Chesler	Elec. Eng.	Dublin, Ga.
Sanders, John, Jr.	Agriculture *	Dothan
Saunders, Alex. Marion	General	Pensacola, Fla.

Scarborough, Charles Phillip	-----Elec. Eng.-----	LaFayette
Scott, Charles	-----Chem. Eng.-----	Besemer
Screws, Euel Augustus	-----Arch. Eng.-----	Auburn
Sherling, Edward Creech	-----General-----	Greenville
Shirey, John Brett	-----Mech. Eng.-----	Guin
Sizemore, Troy Blanch	-----Mech. Eng.-----	Guin
Sledge, Leonidas Bryan	-----Elec. Eng.-----	Greensboro
Smith, Hester Moore	-----Civ. Eng.-----	Birmingham
Smith, Marion Gordon	-----Mech. Eng.-----	Birmingham
Smith, Robbie	-----General-----	Auburn
Smith, Virgil Alfred	-----Mech. Eng.-----	Slocomb
Snuggs, Charles Hiram	-----Elec. Eng.-----	Roanoke
Spratling, Sarah Augusta	-----Agriculture-----	Gold Hill
Spurlock, Hugh Griffith	-----Elec. Eng.-----	Eufaula
Stewart, Dewey	-----Agriculture-----	Winchester, Tenn.
Stewart, Robert Hiram	-----Vet. Med.-----	Caesar, Miss.
Stringfellow, Harry	-----Civ. Eng.-----	White Bluff, Tenn.
Tamplin, Virgil Cline	-----Agr. Education-----	Auburn
Taylor, John Osman	-----Elec. Eng.-----	Auburn
Taylor, Robert Emmett	-----Mech. Eng.-----	Auburn
Thigpen, James Andrew	-----Agriculture-----	Auburn
Till, Samuel Brightman	-----Vet. Med.-----	Mac donia
Trawick, Zachary Taylor	-----General-----	Opelika
Tribble, John Furman	-----Civ. Eng.-----	Dora
Turner, Morton Victor	-----Mech. Eng.-----	Quitman, Ga.
Turnipseed, George Thomas	-----Vet. Med.-----	Fitzpatrick
Waller, Otis Eugene	-----Agr. Education-----	Auburn
Ward, George Washington	-----Civ. Eng.-----	Pine Apple
Watkins, Harry Wilfred	-----Civ. Eng.-----	Birmingham
Weedon, Edward Beall, Jr.	-----Elec. Eng.-----	Eufaula
Weldon, Arthur Luna	-----Chem. & Met.-----	Titus
Wendel, David Deaderick	-----Elec. Eng.-----	Jacksonville, Fla.
Williams, Obadiah Dumas	-----Elec. Eng.-----	Eutaw
Williams, William Francis	-----Civ. Eng.-----	Eutaw
Wilson, Earle Frederick	-----Mech. Eng.-----	Brewton
Witham, Hamlin Varney	-----Civ. Eng.-----	Orlando, Fla.
Zuber, Charles Hodges	-----Elec. Eng.-----	Auburn

SOPHOMORE CLASS

Abernethy, Paul Lee	-----General-----	Banks
Albritton, Jessie McDaniel	-----Agr. Education-----	Camden
Albritton, James Thomas	-----Agriculture-----	Hartford
Allen, Thomas Walton	-----Agriculture-----	Cromwell
Allen, William Hugh	-----Architecture-----	West Point, Ga.
Alley, Frank Hayne	-----Civ. Eng.-----	Macon, Ga.
Anderson, Robert Archer	-----Mech. Eng.-----	Pittsburg, Tenn.
Andrews, James Leslie	-----General-----	Greenwood, S. C.
Arnall, John Fleming	-----Civ. Eng.-----	Senoia, Ga.
Arnall, James Wiley	-----Agriculture-----	Senoia, Ga.
Baird, James John	-----Artchitecture-----	Besemer
Barnes, Metullus Ard	-----Chem. Eng.-----	Ozark
Barnes, Reid Boyleston, Jr.	-----General-----	Opelika
Barry, James Coyles	-----Elec. Eng.-----	Mobile
Bartlett, Elmer Weaver	-----Elec. Eng.-----	Lineville
Bates, Josiah Kilgore	-----Elec. Eng.-----	Greenville, S. C.
Beasley, Alice	-----General *-----	Auburn
Belcher, William Stansel	-----Elec. Eng.-----	Largo, Fla.

Belyeu, John Paul	Elec. Eng.	Alexander City
Benson, Earl Atwood	Mech. Eng.	Mobile
Berry, John William	Vet. Med.	Red Bay
Bethune, Thomas Reese	General	Pavo, Ga.
Bevis, James Frank	Elec. Eng.	Roanoke
Bickerstaff, Hugh Jennings	Pharmacy	Columbus, Ga.
Bickerstaff, Lindsay Neill	Elec. Eng.	Brickyard
Blackmon, Marshall J.	Elec. Eng.	Girard
Blair, William Robert	Chem. Eng.	Bessemer
Boaz, Oliver	Elec. Eng.	Childersburg
Boyd, Ralph Franklin	General	Emelle
Brackin, Rufus Foy	Agriculture	Headland
Branscomb, Clayton Sanford	Elec. Eng.	Union Springs
Bridges, James Ernest	Agr. Education	Notasulga
Brown, Margaret	General	Auburn
Brownell, Harold Spencer	Elec. Eng.	Birmingham
Bryan, James Monroe	Vet. Medicine	Auburn
Buchanan, Claude N.	Agriculture	Riverton
Butler, William Oscar, Jr.	Chem. Eng.	Chipley, Fla.
Caldwell, Edward Gordon	Agr. Education	Tallassee
Caldwell, Elbert Hays	Agriculture	Scottsboro
Cannon, Charles Louis	General	Birmingham
Cannon, James Clifton	Agr. Education	Marbury
Carr, John Hunter	Agriculture	McLeod, Miss.
Carr, William Jolley	Elec. Eng.	Montgomery
Carter, Thomas Otto	Mech. Eng.	Birmingham
Case, Lawrence Chapman	Elec. Eng.	Mobile
Castleberry, Watkins Batt	Vet. Medicine	Castleberry
Chambliss, Lauren Morgan	Elec. Eng.	Montgomery
Chapman, Charles Stephen	Elec. Eng.	Grove Hill
Chapman, Wheeler Edward	Civ. Eng.	Enterprise
Chesser, Frederick Julian	Agr. Education	Andalusia
Clarke, Franklin Ashton	Agriculture	Andalusia
Conner, Adolph Allen	Civ. Eng.	Montgomery
Copeland, Gladys	General	Auburn
Craven, William Meriwether	Elec. Eng.	Birmingham
Creel, Homer Johnson	Civ. Eng.	Morris
Crockett, Huel Lloyd	Architecture	Girard
Cross, Robert Kernachan	Civ. Eng.	Cherokee
Cullars, Joseph William	Agr. Education *	Auburn
Cunningham, James Ashby	Elec. Eng.	Linden
Currie, Charles Mac	Elec. Eng.	Atmore
Daniel, Hugh Carson	General	Auburn
Davis, John Elliott	Civ. Eng.	Birmingham
Davis, Pleasber Newton	Agr. Education	Dadeville
DelHomme, William Edward	Elec. Eng.	Mobile
DeShazo, Albert Malcolm	Elec. Eng.	Warrior
Duckworth, James Vardaman	Vet. Medicine	Mendenhall, Miss.
Dumas, Robert Tipton	Agriculture	Mobile
Durban, Sebastian Anthony	Chem. Eng.	Florence
Ervin, Samuel James	Agriculture	Camden
Esdale, Charles Chester, Jr.	Chem. & Met.	Birmingham
Espy, Herbert Otto	Civ. Eng.	Gordon
Farmer, Willard Theodore	Chem. & Met.	Birmingham
Floyd, Adger Ellison	Agriculture	Clayton
Floyd, Cecil	Vet. Medicine	Phenix City
Floyd, Harold Cobb	Civ. Eng.	LaGrange, Ga.

Floyd, Kate	General	Auburn
Ford, John William, Jr.	Agr. Education	Montgomery
Foster, Ware William	Elec. Eng.	Montgomery
Fudge, Carl Sellers	Mech. Eng.	Huntsville
Gantt, James Roy	General	Deatsville
Gardner, Louis Wright	Elec. Eng.	Auburn
Gearreld, William Pendleton, Jr.	Elec. Eng.	Newnan, Ga.
Gibson, Homer Franklin	Agr. Education	Hartselle
Gillespie, Judson Marvin	Elec. Eng.	Gallion
Godwin, Rufus Brawell	Agriculture	Americus, Ga.
Gottlieb, Leon	Civ. Eng.	Birmingham
Grisham, William Peal	Agr. Education	Athens
Guthrie, Joe Martin	Mech. Eng.	Inverness
Hale, William Thurber	Mech. Eng.	Akeley, Pa.
Halfman, Emmett William	Elec. Eng.	Montgomery
Hall, Julian Orison	General	Dothan
Halse, Harry Osborn	Chem. Eng.	Montgomery
Hamner, Arthur Lee	Agriculture	Amory, Miss.
Hanson, Alexander Barrand, Jr.	Elec. Eng.	Birmingham
Hardeman, Harry Hilliard	Civ. Eng.	Auburn
Harkins, Curtis Ivey	Vet. Medicine	Sycamore
Harlin, Edgar Franklin	Agr. Education	Roanoke
Harris, George Leo	Agr. Education	Grady
Hays, Arthur Clairborn	Elec. Eng.	Hartselle
Hays, Dupree	Civ. Eng.	Mobile
Hays, John Cecil	Civ. Eng.	Hartselle
Henderson, George Halsey	Agriculture	Tuscumbia
Hendley, Flavius Joseph	Elec. Eng.	Livingston
Hereford, Lawrence Edward	Agriculture	Gurley
Hines, Jack Yarbrough	Elec. Eng.	Huntsville
Hitchcock, Ray	Agriculture	James
Hodges, Dolon Ernest	General	Mobile
Hogle, Carl Ransom	Elec. Eng.	Birmingham
Hollingsworth, Lawrence Milton	Agr. Education *	Jacksonville
Holstun, Beverly Reid	Agriculture	Waverly
Howard, Hall Caldwell	Civ. Eng.	Carbon Hill
Hunnicut, James Madison	Civ. Eng.	Birmingham
Hurt, James William	General	Marion
Ingle, Erastus Winom	Agriculture	Oneonta
Ingle, James Hubbert	Agriculture	Nauvoo
Jackson, Julian Harold	Chem. Eng.	Largo, Fla.
Jacob, Edward C.	Civ. Eng.	Selma
James, Henry Malcolm	Elec. Eng.	Waverly
Jennings, Joseph Pitt	Mech. Eng.	Gonzalez, Fla.
Jervis, Richard Albert	Elec. Eng.	Albany
Johnson, Ingram Purser	Agriculture	Sweetwater
Johnson, Oren	Mech. Eng.	Pike Road
Jones, James Middleton	Agriculture	New Market
Kahn, Herbert Rosenberg	Mech. Eng.	Montgomery
Keller, Charles Spurgeon	Agr. Education	Hanceville
Kendrick, William Henry	Agriculture	Massillon
Knight, Walter Douglas	Chem. & Met.	Columbus, Ga.
Knowles, Frank Alexander	Chem. & Met.	Birmingham
Knox, Ira Landrith	Agriculture	Chattanooga, Tenn.
Kohloss, Gladstone Leighton	Civ. Eng.	Salisbury, N. C.
LaCroix, Charles Adolphus, Jr.	Mech. Eng.	Birmingham

Lamar, Charles Hurt	Elec. Eng.	Tuskegee
Landrum, William Judson	Mech. Eng.	Vredenburgh
Lawson, James Levi	Agr. Education	Banks
Lee, Pierre	Vet. Medicine	Elba
Lee, Robert Ernest	Elec. Eng.	Evergreen
LeSueur, Clarence Preston	Civ. Eng.	Waverly
Lewter, James Malcolm	Agriculture	Huntsville
Lindsley, John Williams	Chem. Eng.	Nashville, Tenn.
Long, Andrew Bismarck, Jr.	Chem. & Met.	Greenville
Longshore, Paul Jennings	Agriculture	Columbiana
Lowery, Julius Caesar	Agr. Education	Cullman
McCartney, Charles Eugene	Elec. Eng.	Ft. Payne
McCrary, Hill	Vet. Medicine	Lineville
McDonald, Robert Vincent	Elec. Eng.	Mobile
McKinnon, James Lindsey	Civ. Eng.	Talladega Springs
McLennan, James Alan	Mech. Eng.	Clarkston, Ga.
McNair, Herbert Glenn	General	Ozark
McWilliams, Clayton Floyd	Mech. Eng.	Cuthbert, Ga.
McWilliams, Richard Edward	Agriculture	Catherine
Malone, Andrew	Elec. Eng.	Ensley
Mandy, William Henry	Mech. Eng.	Ensley
Mardre, Robert Burton	General	Auburn
Marsh, Bryan Bell	Elec. Eng.	Yantley
Martin, Fred Broughton	Elec. Eng.	Ft. Deposit
Mason, Hibbard Livingston	General	Evergreen
Mayson, Wilmer Monroe	Mech. Eng.	Mobile
Melton, Henry Dallas	Agr. Education	Dothan
Melvin, Herbert Marshall	Agriculture	Eutaw
Middleton, Walter Conyngton	Elec. Eng.	Birmingham
Miller, Fletcher Edward	Civ. Eng.	Floralia
Moore, Dewey Columbus	Agriculture	Andalusia
Morrow, Samuel Lundy	Agriculture	Somerville
Naftel, Bolling King	Elec. Eng.	Naftel
Naftel, Lee Albert	Chem. Eng.	Naftel
Nail, James Clyde	Civ. Eng.	Dolomite
Nettles, Jack Finklea	Elec. Eng.	Tunnell Springs
Norwood, Sidney Lawson	General	Birmingham
O'Donnell, Waldrop Lavert	Mech. Eng.	Sanford, Miss.
O'Neal, James Clanton	Elec. Eng.	Andalusia
Ordway, Charles Boutelle	Chem. Eng.	Murfreesboro, Tenn.
Orr, James Lee	Vet. Medicine	Waverly
Orum, Gustavus Adolphus	Agriculture *	Midway
Osborn, Fred Wood	Elec. Eng.	Birmingham
Owen, James Robert	Agr. Education	Bessemer
Parish, Edward Walker	Agriculture	Clayton
Parker, William Tarpley	Chem. & Met.	Lineville
Parks, Leon Hayne	Mech. Eng.	Fayetteville
Pate, John William	Agr. Education	Blountsville
Pearce, James Gibson	Elec. Eng.	Winfield
Peniston, Thomas Jackson	Mech. Eng.	Newnan, Ga.
Perdue, Albert Monroe	Elec. Eng.	Elba
Perry, Lee Colquitt	Architecture	Newnan, Ga.
Pfeil, Theodore Henry	Agriculture	Gadsden
Pippin, Reginald Frederick	General *	Ozark
Pistole, William Melvin	Agriculture	Toulminville
Plant, Wilella	Architecture	Opelika
Preiss, Phil	Mech. Eng.	Montgomery
Price, Thomas Willets	General	Birmingham

Pritchett, Will Tom	Agr. Education	Inverness
Purifoy, George Richard	Elec. Eng.	Brewton
Rainer, Lamar Sidney	Agriculture	Elba
Randall, Ernest Franklin	Agr. Education	Marion
Ray, Willis Morton	Vet. Medicine	Alexander City
Reaves, Raymond Mayberry	Agriculture	Centerville
Redd, Carl Leitner	Civ. Eng.	Suspension
Reece, James Stillman	Mech. Eng.	Gordo
Reed, John Thompson	Civ. Eng.	Pensacola, Fla.
Richardson, Jewell Edward	Agriculture *	Montgomery
Riley, Clayton Wesley	Architecture	Tuskegee
Riley, Emmett Wesley	Elec. Eng.	Punta Gordo, Fla.
Roberson, James Rex	Agr. Education	Haleyville
Roberts, Andrew Jack	Elec. Eng.	Wadley
Robinson, Merritt Patrick	Elec. Eng.	Montgomery
Ruffin, Winford Audry	Agriculture	Deatsville
Russell, Roy Otis	Agriculture	Hartselle
Ryland, Joseph Henry	Vet. Medicine	Drewry
Satterfield, Reuben Major	Agr. Education	Ashland
Saunders, Charles Richard	Chem. Eng.	Pensacola, Fla.
Savage, Cole	Agriculture	Auburn
Savage, Zack	Agriculture	Gordo
Shaver, Ross Otis	Agriculture	Florence
Sills, Thomas Herman	General	Camden
Simmons, William Clevie	Vet. Medicine	Auburn
Sims, William Bartow	Elec. Eng.	Grand Bay
Smith, Versie Aubrey	Elec. Eng.	Alexander City
Smith, Raymond Vinson	Agriculture *	Birmingham
Stallings, Crofford Freeman	Mech. Eng.	Newman, Ga.
Stallworth, Emmett Lee, Jr.	General	Evergreen
Staples, Johnson Heflin	Vet. Medicine	Goodwater
Steindorf, Herman Alfred	Mech. Eng.	Cullman
Stephenson, James Gordon	Elec. Eng.	Moulton
Stevens, Daniel Augustus	Mech. Eng. *	Yonges Island, S. C.
Stevenson, Adlai Ross	Elec. Eng.	Notasulga
Stewart, Albert Graham	Architecture	Greenville
Stewart, Frank McLean	Agriculture	Hope Hull
Stokes, William Monzan, Jr.	Elec. Eng.	Cordova
Stough, Kelly Howard	Elec. Eng.	Midland City
Straiton, John Tarry	Mech. Eng.	Greensboro
Stutts, Dewey William	Mech. Eng.	Florence
Sullivan, Laten Ray	Vet. Medicine	Boaz
Sutton, Robert Lee, Jr.	General	Orrville
Tatum, Colonel David	Agr. Education *	Dawson
Taylor, Murray Clinton	Elec. Eng.	Ashford
Thagard, Thomas Werth	Agriculture	Toulminville
Thomason, William Douglas	Agriculture	Greenville
Tidmore, David Borden	Chem. Eng.	Moundville
Tucker, Arthur Hall	Elec. Eng.	Thomasville
Turnipseed, Samuel Guy	Agriculture	Mathews
Upchurch, William Kendrick	Civ. Eng.	Montgomery
Vaughn, Henry Asbury	Elec. Eng.	Winston-Salem, N. C.
Vinson, Oliver Taylor	Agriculture *	Pensacola, Fla.
Waller, Henry Lorenzo	Pharmacy	Auburn
Waller, John Thomas	Agriculture	Auburn
Warren, Felix Dewey	Mech. Eng.	Albany

Watson, Joseph Marion	Agriculture *	Pensacola, Fla.
Watson, Thomas Robert	Agriculture	Lincoln
Watson, William Boswell	Civ. Eng.	Lakeland, Fla.
Webb, Ralph Powe	General	Birmingham
Wellborn, Samuel Colvin	Architecture *	Union Springs
West, Alford Thurber	Civ. Eng.	Birmingham
West, Harry Irvin	Agr. Education	Presho, S. D.
White, William Stenhouse	Agr. Education	Marbury
Whitlock, William Parker	Agriculture	Sheffield
Wilkes, George Byron, Jr.	Civ. Eng.	Cordele, Ga.
Wilkinson, Clinton Seed	General	Selma
Williams, Horace Greeley	Elec. Eng.	Seale
Williamson, Fred Carr	Mech. Eng.	Birmingham
Willingham, Raleigh Manning	Agriculture	Lineville
Wood, Carl Richard	Agr. Education	Phil Campbell
Wright, John Peavy	General *	Auburn
Zuber, Otis Zachery	General	Auburn

FRESHMAN CLASS

Adams, Jesse Brantley	Civ. Eng.	Ozark
Adams, William Roger	Agriculture	Ozark
Alexander, Shirley Fairfax	Chem. & Met.	Prattville
Allen, Allison Roland	Mech. Eng.	Cuba
Almgren, Fred Justin	Mech. Eng.	Fairfield
Andrews, Paul LeGrand	Civ. Eng.	Montgomery
Armstrong, Frances Kimbell	General	Auburn
Barnes, Joseph Marcellus	Elec. Eng.	Dothan
Barry, Paul Pruitt	Elec. Eng.	Montgomery
Bates, Bascom Anquest	Civ. Eng.	Montgomery
Bates, John William	Elec. Eng.	Mobile
Bealle, James William	Civ. Eng.	Greenwood, Miss.
Beasley, Walter Gordon, Jr.	Civ. Eng.	Samson
Bell, Bernard Chesley	Chem. Eng.	Lineville
Benning, Augustus Harrison	Civ. Eng.	Atlanta, Ga.
Benton, Thomas Hill	Agriculture	Amarillo, Tex.
Berlin, Israel Lionel	Elec. Eng.	West Blocton
Bird, Edwin Bruce	Agriculture	Citronelle
Black, Bruce Hoffman	Elec. Eng.	Athens
Blasingame, Edmond Lurton	Agriculture	Montgomery
Bonner, Hubert Armour	General	Roanoke
Bostick, William Hollis	Agr. Education	Guin
Boyd, Clary Paul	Agriculture	Auburn
Brewer, Willard Winons	Elec. Eng.	Montgomery
Brice, Ralph Gordon	Elec. Eng.	Charlotte, N. C.
Brock, Leland Grace	Agriculture	Melborne
Brown, Hal Rodolphus	Mech. Eng.	Sulligent
Brown, James Marion	Elec. Eng. *	Columbia
Brown, Julian	Agriculture	Yantley
Buchanan, Paul Adair	Elec. Eng.	Anniston
Caldwell, Clinton Lanier	Agriculture	Huntsville
Cammack, Ralph Waldo	Agriculture	Grove Hill
Camp, LeRoy, Jr.	Mech. Eng.	Birmingham
Canterbury, Alfred Kirkling	Elec. Eng.	Linden
Carper, Charles Elliott	Mech. Eng.	Birmingham
Carter, John Miller	Mech. Eng.	Roanoke
Chambers, Ernest Howell	Civ. Eng.	Boaz
Chambliss, Lambert Alexander, Jr.	Mech. Eng.	Prattville

Chrietzberg, John Ernest	Vet. Medicine	Eclectic
Clements, William Greene	General	Athens
Cobb, Howard	Elec. Eng.	Carbon Hill
Coker, Horlick Russell	Civ. Eng.	Sylacauga
Collins, Milton Massey	Elec. Eng.	Ozark
Cone, Aaron Asberry	Agr. Education	Hubert, Ga.
Cooke, Herbert Earl	Agriculture	Auburn
Cooper, William Creed	Agriculture	Atlanta, Ga.
Cox, Preston Arthur	Agr. Education	Hamilton
Crane, Theodore Poole	Elec. Eng.	Birmingham
Creel, Annie B.	General	Morris
Creel, Eugene Mathew	Agriculture	Morris
Cross, John Storrs	Elec. Eng.	Birmingham
Cruise, William Patrick	Agr. Education	Plantersville
Cunningham, Edwin Lawrence	Agriculture *	Furman
Curtis, Harry	General	Auburn
Davis, Henry Clayton	Architecture	Littleton
Davis, John McIntosh Kell	Highway Eng.	Griffin, Ga.
DeLoach, Byron Everette	Agriculture	Buffalo
Dennis, Jephtha Welden	Elec. Eng.	Montgomery
DeRamus, Thomas Barnett	Agriculture	Verbena
Dickinson, Lawrence Edward	Elec. Eng.	Coy
Dickinson, Robert Charles	Elec. Eng.	Brundidge
Diffie, James Marsh, Jr.	Elec. Eng.	Cordele, Ga.
Dillard, Samuel Tilden	Agr. Education	Hamilton
Diseker, Robert Arthur	Mech. Eng.	Birmingham
Dix, Oliver Paul	Civ. Eng.	Whaley, Miss.
Dowdy, Rufus Brown	Mech. Eng.	Florence
Dowe, Thornton Gregory	Elec. Eng.	Montgomery
Dreyspring, Adolphe Theodore	Agriculture	Waugh
Dudley, Charles, Jr.	Elec. Eng. *	Columbus, Ga.
Duke, Andrew Jesse	Mech. Eng.	Birmingham
Dunbar, John Norman	Mech. Eng.	Newnan, Ga.
Durr, Harry Eddie	Vet. Medicine	Brookhaven, Miss.
Dyal, Benjamin Franklin	Agriculture	White Oak, Ga.
Earnest, Chloe Pauline	General	Auburn
Edey, Aubrey Ambrecht, Jr.	General	Mobile
Edwards, Levert Evans	Elec. Eng.	Clanton
Edwards, Lloyd Bonwell	Elec. Eng.	Sylacauga
Eidson, George T.	General	Cuthbert, Ga.
Elliott, Welch Brantley	Civ. Eng.	Leeds
England, John Edward	Civ. Eng.	Mobile
Farr, Osborne Allen	Mech. Eng.	Bessemer
Farrell, Oscar Beauchamp	Agriculture	Catherine
Foote, Eugene Orlean	General	Kaplan, La.
Ford, Jesse Hill	General	Marion
Ford, Ross Vexton	Agr. Education	Hamilton
Foreman, Clyde Wesley	General	Mobile
Fowler, Henry Eugene	Agriculture	Uniontown
Fuller, Marion Lanier	Agriculture	Huntsville
Fullwood, Charles Mebane	General	New York, N. Y.
Fulton, Adelbert Graham	Agriculture	Dadeville
Galbreath, Henderson	Vet. Medicine	Union Church, Miss.
Gamble, Cary Breckenridge	Elec. Eng.	Huntsville
Gibson, Charles Griffin	Elec. Eng.	LaGrange, Ga.
Gilmer, Eugene Edwards	Civ. Eng.	Birmingham

Goddard, James Ersie	Elec. Eng.	Oneonta
Goldstein, Samuel Franklin	Mech. Eng.	Chattanooga, Tenn.
Goleman, Albert Sidney	Mech. Eng.	Whistler
Goodwyn, William Bibb	Highway Eng.	Montgomery
Grant, George Addison	Agr. Education	Marbury
Gray, John Wilson	Elec. Eng.	Jasper
Greenhill, James Ira	Mech. Eng.	Pratt City
Grier, Lynn Perry	Elec. Eng.	Lumpkin, Ga.
Griffin, Davis Whatley	Vet. Medicine	Lineville
Grimley, Bennett William	Civ. Eng.	Fairhope
Guy, William Vinson	Elec. Eng.	Montgomery
Hahn, Frederick Carl	Mech. Eng.	Birmingham
Hall, Benjamin Grady	Agr. Education	Hamilton
Hall, Lester House	Agriculture	Montgomery
Hanlin, Frank Kirby	Elec. Eng.	Sheffield
Hardy, Miles	Agr. Education	Tyler
Harris, Russell Clemons	Mech. Eng.	Cordele, Ga.
Harrison, John Casey	Agriculture	Selma
Harrison, Joseph Lawrence	Elec. Eng.	Montgomery
Harvey, Jesse Ester	Agr. Education	Rogersville
Hawkins, Joseph Ray	Agriculture	Midland City
Hawkins, William Burgin	General	Birmingham
Hazen, Charles Albert	Mech. Eng.	Ensley
Heath, William Preston	Elec. Eng.	Opelika
Helms, LeRoy	Agriculture	Honoraville
Hetzler, Robert Glenn	Mech. Eng.	Chattanooga, Tenn.
Holman, Frank Louis	Elec. Eng.	York
Holman, Henderson Looney	Elec. Eng.	Ozark
Holt, Elbert Augustus, Jr.	Architecture	Montgomery
Horne, John	Mech. Eng.	Ensley
Horn, Newton Yeager	Elec. Eng.	Montevallo
Housel, Leslie Raymond	Elec. Eng.	Lathrop
Howard, Percy Harry	Civ. Eng.	Carbon Hill
Huey, George Whitfield	Agr. Education	Wedowee
Hulsey, William Hansell	Elec. Eng.	Carbon Hill
Ivey, Lehman DePriest	General	Montgomery
Johnson, Joseph Thoreau	Elec. Eng.	Meltonville
Johnson, Forrest Joseph	Civ. Eng.	Pascagoula, Miss.
Johnson, Oattie Prather	Elec. Eng.	Americus, Ga.
Johnson, William Cecil	General	Coffeeville
Jones, J. Gordon, Jr.	Elec. Eng.	Cordele, Ga.
Keller, George Morrison	Chem. Eng.	Birmingham
Killough, William Graham	Agriculture	Honoraville
Kling, August John	Elec. Eng.	Mobile
Knowles, Hugo Shaler	Elec.	Montgomery
Lane, Jay Alexander	General	Dadeville
Layton, Egbert Eldren	Vet. Medicine	Cairo, Ga.
Leath, Alonzo Sylvester	Agriculture	Auburn
LeBron, Otto K.	Mech. Eng.	Millbrook
Lee, Edward Tarrant	General	Marion
Lee, Herbert Anthony	Architecture	Andalusia
Leonard, Edmond Charles	Agriculture	Birmingham
Levie, Archie Wood	Mech. Eng.	Goodwater
Levy, Edward Jefferson	Elec. Eng.	Girard
Lloyd, Albert Edward	Mech. Eng.	Republic
Lutz, Earle Guthrie, Jr.	Architecture	Montgomery

McCarley, Thomas Carl	Agr. Education	Lamar
McCutchen, Walker Ponder	Elec. Eng.	Birmingham
McDaniel, Terry Stanfell	Elec. Eng.	Montgomery
McKee, Clyde David	Elec. Eng.	Notasulga
McMillan, Emmett Howard	Civ. Eng.	Sylacauga
McMurray, Fred Harrington	Agriculture	Heflin
Maass, Paul Rudolph	Elec. Eng.	Birmingham
Mann, John Espy	Elec. Eng.	Midland City
Matthews, William Elliott	Elec. Eng.	Montgomery
Mayfield, Collier Curtis	Elec. Eng.	Opelika
Medlock, Olin Campbell	Agriculture	Albertville
Meek, Alfred Edgemont	Agriculture	Idana, Kan.
Mendheim, I. W.	Agriculture	Dothan
Merritt, Ralph R.	Mech. Eng.	Bessemer
Michauz, Enrique Eugene	Architecture *	Mexico
Miller, Frederick Monroe	Mech. Eng.	Columbus, Ga.
Miller, Henry Knox	Elec. Eng.	Monticello, Fla.
Miller, Robert Audrey	Elec. Eng.	Linden
Milligan, John Calhoun	Agriculture	Newton
Milligan, Harris Evans	Agriculture	Newton
Moncreif, Malcolm Graham	General *	Prattville
Moore, John Allen, Jr.	Civ. Eng.	Lexington, Ga.
Morris, Frank Howard	Elec. Eng.	Talladega
Morris, Jesse Edwin	Agr. Education	Talladega
Morris, Raymond Henry	Chem. Eng.	Statesboro, Ga.
Mosley, John Erskine	Elec. Eng.	Lockhart
Mosley, William Kelly	Elec. Eng.	Pensacola, Fla.
Moulton, Edward Russell	Mech. Eng.	Mobile
Neff, George Karl	Elec. Eng.	Sheffield
Nelson, Thomas Neil	Agr. Education	Columbiana
Newman, Henry Floyd	Elec. Eng.	LaFayette
Newton, Wesley Carl	Elec. Eng.	Dothan
Nicaise, Placide Dominia	Vet. Medicine	Kiln, Miss.
Norris, Roy Hart	Civ. Eng.	New Brockton
Norton, William Forest	Mech. Eng.	Montgomery
Nunn, Robert Alexander	Agr. Education	Loachapoka
O'Neel, Robert Wismer	General	Mobile
Orr, Frank M.	Architecture	LaGrange, Ga.
Palmer, Martin	Agriculture	Carson
Parker, William Hewlett	Agriculture	Birmingham
Pate, William Wesley	Agr. Education	Paul
Patrick, Irving	Agr. Education	Vinemont
Perry, Hugh David	Mech. Eng.	Newnan, Ga.
Phillips, George Wendell	Mech. Eng.	Europa, Miss.
Pippin, James Wyatt	General	Ozark
Powe, Robert McKee	Mech. Eng.	Silas
Prather, Robert Williams, Jr.	Elec. Eng.	Sylacauga
Price, Val	Elec. Eng.	Floral
Purifoy, James Francis	Civ. Eng.	Brewton
Ramsay, Andrew Elias	Agriculture	Sumterville
Redwine, Frank Hutchison	Agriculture	Palmetto, Ga.
Reese, John Lewis	Civ. Eng.	Pensacola, Fla.
Riggs, Eldon Bennette	Agriculture	Detroit
Riley, Zaner Dexter	Chem. Eng.	Headland
Roberts, Phil Taylor	Elec. Eng.	Montgomery
Rudolph, Nathan Bettis	Agr. Education	Pleasant Hill

Rutledge, William Burgess	Elec. Eng.	Monroeville
Ryman, Harold Edward	Elec. Eng.	Hastings, Fla.
Samford, C. A. L.	Agriculture	Opelika
Sanders, Louis Neal	General	Opelika
Sawyer, Ralph Duncan	Elec. Eng.	Monroeville
Scalco, Vincent Augustine	Chem. Eng.	Birmingham
Schaub, Alexander M.	Mech. Eng.	Eufaula
Scott, Audrey Ashuer	General	Mobile
Scott, Ernest DeWitte	Elec. Eng.	Cropwell
Scruggs, Joseph Alexander	Mech. Eng. *	Brewton
Segrest, Clyde Marx	General	Slocomb
Semmes, Oliver John	Civ. Eng.	Pensacola, Fla.
Shelley, Levie Hightower	Civ. Eng.	Eufaula
Shepherd, Lester C.	Agriculture	Snowdown
Simpson, Robert Lee, Jr.	Chem. Eng.	Birmingham
Sitz, Willard Clarence	Civ. Eng.	Gadsden
Smith, Claude Green	General	Ft. Valley, Ga.
Smith, Charles Milton, Jr.	Chem. Eng.	Montgomery
Smith, Charles Samuel	Mech. Eng.	LaFollette, Tenn.
Smith, Eli Milton	Mech. Eng.	Carrollton, Ga.
Smith, Foster Shi	General	Hawthorne, Fla.
Smith T, Winston Walker	General	Opelika
Snapp, William Thomas	Mech. Eng.	Ensley
Stephenson, Henson Knowlen	Civ. Eng.	Selma
Stevenson, Joe Wilson	Elec. Eng.	Notasulga
Stewart, Gardner	Agriculture	Prattville
Stewart, Ira Melson	Civ. Eng.	Newnan, Ga.
Stewart, Joseph Benjamin	Agriculture *	Sylacauga
Stewart, William Dossie	Agriculture	Sylacauga
Stockelberg, Frank Kevan	Elec. Eng.	Canal Zone, Panama
Strickland, Leland Albert	Chem. Eng.	Birmingham
Strother, George William	Elec. Eng.	Camden
Swango, Beverley Holmes	Elec. Eng.	Birmingham
Swanson, Albert Rich	General	Gadsden
Sweet, Henry W.	Agriculture	Bessemer
Tapscott, Leldon Hunter	Agriculture	Falkville
Taylor, Clara Ramsey	Architecture *	Auburn
Taylor, Robert Perkins	Elec. Eng.	Andalusia
Taylor, Robert Wooddy	Agriculture	Buffalo
Thomas, William Bertrand	Elec. Eng.	Sylacauga
Timberlake, Phil Samuel	Elec. Eng.	Stevenson
Todd, Edward Eugene, Jr.	Elec. Eng. *	Riderwood
Treadwell, Thomas Andrew	Agriculture	Dadeville
Trees, Benjamin Nelson	Elec. Eng.	Birmingham
Trice, William Troupe	Mech. Eng.	Gilbertown
Trum, Alexander David	Chem. Eng.	Montgomery
Turk, Clarence Hale	Mech. Eng.	Marion
Turner, Warren Candler	Elec. Eng.	Birmingham
Turner, William Milam	Chem. Eng.	Sheffield
Vickery, Clayton Anderson	Agr. Education	Hamilton
Voigt, Milton Joseph	Elec. Eng.	Jasper
Wakefield, Audley	Agriculture	Carbon Hill
Waldrop, Belton Gilbreath	Chem. Eng.	Cordova
Walker, Oscie Benning	Mech. Eng.	Uchee
Ward, J. B.	Architecture	Dothan
Warfield, Ralph Henry	Civ. Eng.	San Domingo, D. R.
Weaver, Robert Edgar	Elec. Eng.	Birmingham

Whitaker, Roy Baird	Agriculture	Paint Rock
Wiatt, John Edward, Jr.	General *	Auburn
Wilkinson, John	Chem. & Met.	Prattville
Williams, Lemmie Lee	Agr. Education	Rutledge
Willingham, Edward George, Jr.	Mech. Eng.	Atlanta, Ga.
Winston, Charles Henry	Agriculture	Geiger
Winter, Leonard Earl	Elec. Eng.	Sheffield
Wise, Helen	General	Auburn
Wise, H. A.	Elec. Eng.	McCullough
Wise, Owen Frederick	General	McCullough
Wood, Frederick Dickson	Vet. Medicine	Clinton, La.
Wood, William Thorington	General	Montgomery
Woolley, Willie Kelly	General *	Auburn
Wright, Emil Francis	Agriculture	Auburn
Wright, Leslie	Agriculture	Auburn
Wynn, Andrew Malcolm	Elec. Eng. *	Floralda
Zachry, Charles Candler	Elec. Eng.	Notasulga

TWO YEAR COURSE IN PHARMACY

SECOND YEAR

Andrews, James Glover	LaFayette
Atkins, John Lewis	Heflin
Bruner, Oliver Glenn	Ft. Deposit
Dillon, Hugh Crawford	Birmingham
Dunn, John Edward	Abbeville
Gaston, Charles Ware	Fayetteville
Megginson, Theodore Jackson	Thomasville
Parker, Phillip Harold	West Point, Ga.
Sandlin, William Woodfin	Moulton
Segrest, Purser George	Notasulga
Taylor, Norris Pelham	Gadsden
Wilson, Grady L.	Troy

FIRST YEAR

Ariail, Henry Ellis	Birmingham
Bandy, James Wilson, Jr.	Montevallo
Bankson, John Orion	Gadsden
Davis, Walter Scott	LaGrange, Ga.
Dowdell, William Oliver	Auburn
Gross, Joseph Leopold	Birmingham
Hagood, Cecil Crum	Evergreen
Hannon, Adrian Ward	Eclectic
Hanson, John Henry	Waverly
Hughes, George Walton	Madison
Johnson, Dewey Hobson	Brundidge
Lambert, George McLeod	Bay Minette
Mason, Frank Wynton	Brewton
Self, Hobart Hershel	Lewisburg
Temerson, Milton	Carbon Hill
Williams, C. B., Jr.	Clayton
Wood, Ernest S.	Buckawana, Miss.
Word, Clarence Paul	Wedowee

PRE-MEDICAL COURSE

SECOND YEAR

Botta, Louis Patrick	Fairfield
Bullen, General Shafter	Red Bay
Byrd, Mark McCulloh	Blanton
Floyd, Cyril Franklin	Phoenix City
Gay, Eldridge	Roanoke
Hare, Nolan Roy	Manchester
Johnson, Thomas Bernard	Coffeeville
Lacey, Charles Morris	Bessemer
Letcher, Julian Lightfoot	Shorter
McCulloh, Hugh, Jr.	West Point, Ga.
MacDonald, Francis Bethune	Montgomery
Martin, Thomas Earle	Plantersville
Price, George Louie	Gordo
Robbins, Eugene	Selma
Russell, Clifton Clarke	Fayetteville
Stallworth, William Leo	Orrville
Watwood, Vernon Bell	Alexander City

FIRST YEAR

Albritton, Burnett	Albertville
Britt, Arnold Huddleton	Andalusia
Cross, Charles Preston	Bessemer
Egbert, Duane McKinley	Thomaston
Harbour, Clarence Glenn	Piedmont
Knox, James LaFayette	Chattanooga, Tenn.
Thomason, Robert Lester	Albertville
Warren, Edwards Stephens	Eclectic
Woolf, Joseph Henry	Piedmont
Yarbrough, Oscar DeMell	Auburn

SPECIAL STUDENTS

Adams, Etheridge Emmett	Pharmacy	Eva
Aguilera, Paul	Applied Elec.	Mobile
Averett, William Dennis	Agriculture	Aquilla
Bethune, Richard Frederick	Elec. Eng.	Lumberton, N. C.
Bross, William L. McKinney	Mech. Eng.	Nixburg
Burton, Thomas Henry, Jr.	Chem. & Met.	Oxford
Cain, Austin	Agriculture	Birmingham
Chambers, Duke Merriwell	Mech. Eng.	Sheffield
Cox, Holland Robert	Agriculture	Columbiana
Cuadras, Cristobal, Jr.	Vet. Medicine	Santiago, Cuba
Davis, Samuel Herman	Agriculture	Sumterville
DeLong, Chauncey H.	Pharmacy	Mobile
Dinwiddie, Horace Milton	Agriculture	Washington, D. C.
Dyal, John Alexander	Agriculture	White Oak, Ga.
Foshee, Mitchell Pierre	Agriculture	Billingsley
Graves, Hobson William	Vet. Medicine	Pageland, S. C.
Hale, Gordon Winston	Chem. Eng.	Birmingham
Hare, Karl Thomas	Pharmacy	Manchester
Harris, Peter Tracy	Agriculture	Macon, Ga.
Hatchett, Guy Parker	Vet. Medicine	Winchester Tenn.
Haynie, Seth Stephens	Agriculture	Tignall, Ga.
Heflin, James Thomas, Jr.	General	LaFayette
Hightower, John Milton	General	Sylacauga
Hill, Howard H.	Vet. Medicine	Wilsonville

Hooker, Nettie	General	Auburn
Hornsby, Grover Jackson	Elec. Eng.	Tallassee
Hummel, Edwin Forrest	Agriculture	Huntsville
Jenkins, Ulysses Clanton	Agriculture	Corona
Johansen, Joseph P.	Architecture	Louisville, Ky.
Kelly, Andrew Feagin	Architecture	Unadilla, Ga.
Koon, George Early	Agriculture	Gordo
Lacy, John Ingle	Applied Elec.	Mobile
Lamb, James Geddes	Applied Elec.	Birmingham
Lentz, James Earl	Applied Elec.	Athens
Lyman, Edward Samuel, Jr.	Applied Elec.	Montevallo
McDonald, Ernest Percy	Mech. Eng.	Auburn
McLaughlin, James Perry	Mech. Eng.	Birmingham
Moody, James Albert	Agriculture	Scottsboro
Meador, Cedric Boykin	Elec. Eng.	Myrtlewood
Oster, Irvin	Mech. Eng.	Montgomery
Padgett, Stark	General	Hartford
Pennington, Byron Yarbrough	Pre-Med.	Andalusia
Ponder, William Joseph	Agriculture	Walnut Grove
Sharp, Thomas Hershfelt	Agriculture	Montgomery
Speer, Cary	Pharmacy	Clanton
Spencer, Leon	Pre-Med.	Goshen
Spencer, Salideon Aulius	Mech. Eng.	Eutaw
Stoves, William Henry	Mech. Eng.	Ensley
Styles, Bernard William	Architecture	Birmingham
Teagle, Ira Cleo	Applied Elec.	Phoenix City
Winn, Chester Williamson, Jr.	Architecture	Birmingham
Worley, Allen	Elec. Eng.	New Hope
Wright, Lawrence Edward	Agriculture	Montgomery
Wright, Thomas Vester	Agriculture	Gadsden
Wynn, W. Gordy	Applied Elec.	Birmingham

FEDERAL REHABILITATION STUDENTS

SENIOR CLASS

Burleson, Benjamin Z.	Veterinary Medicine	Hackleburg
Maynor, Eugene Allen	Animal Husbandry	Townley
Powell, John Stephen	Civ. Eng.	Newnan, Ga.
Ray, Grover Washington	Agr. Education	Alexander City
Waller, George Elmer	Mech. Eng.	Auburn
Williamson, Arthur Herbert	Agriculture	Letohatchie
Wilson, Samuel Lee	Agr. Education	Double Springs

JUNIOR CLASS

Barlow, William Wallace	Vet. Medicine	Cochran, Ga.
Childree, Linney Leonidas	Civ. Eng.	Midland City
Looney, John Burrow	Elec. Eng.	Winchester, Tenn.
O'Donnell, Claude Wainwright	Civ. Eng.	Sanford, Miss.
Pippin, Robert Roy, Jr.	Agr. Education *	Ozark
Scott, Charles	Chem. Eng.	Bessemer
Witham, Hamlin Varney	Civ. Eng.	Orlando, Fla.

SOPHOMORE CLASS

Barnes, Mettullus Ard	Chem. Eng.	Ozark
Blair, William Robert	Chem. Eng.	Bessemer
Clarke, Franklin Ashton	Agriculture	Andalusia
Conner, Adolph Allen	Civ. Eng.	Montgomery
Ford, John William	Agr. Education	Montgomery
Hardeman, Harry Hilliard	Civ. Eng.	Auburn
Harkins, Curtis Ivey	Vet. Medicine	Sycamore
Keller, Charles Spurgeon	Agr. Education	Hanceville
Lee, Pierre	Vet. Medicine	Elba
Morrow, Samuel Lundy	Agriculture	Somerville
Ordway, Charles Boutelle	Chem. Eng.	Murfreesboro, Tenn.
Orr, James Lee	Vet. Medicine	Waverly
Pritchett, Will Tom	Agr. Education	Inverness
Satterfield, Reuben Major	Agr. Education	Ashland
Simmons, William Clevie	Vet. Medicine	Auburn
Smith, Versie Aubrey	Elec. Eng.	Alexander City
Stutts, Dewey William	Mech. Eng.	Florence
Tatum, Colonel David	Agr. Education	Dawson
Turnipseed, Samuel Guy	Agriculture	Mathews
West, Alfred Thurber	Civ. Eng.	Birmingham

FRESHMAN CLASS

Browne, James Marion	Elec. Eng. *	Columbia
Cooke, Herbert Earl	Agriculture	Auburn
Dowdy, Rufus Brown	Mech. Eng.	Florence
Nicaise, Placide Dominia	Vet. Medicine	Kiln, Miss.
Phillips, George Wendell	Mech. Eng.	Europa, Miss.
Thomas, William Bertrand	Elec. Eng.	Sylacauga
Treadwell, Thomas Andrew	Agriculture	Dadeville
Scott, Ernest DeWitt	Elec. Eng.	Cropwell
Williams, Lemmie Lee	Agr. Education	Rutledge
Wood, Fred Dickson	Vet. Medicine	Clanton, La.

SECOND YEAR

Gay, Eldridge	Pre-Medical	Roanoke
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FIRST YEAR

Hanson, John Henry	Pharmacy	Waverly
Williams, C. B., Jr.	Pharmacy	Clayton

SPECIAL STUDENTS

Adams, John Preston	Agriculture	Alexander City
Anderson, Ralph Johnson	General	Corinth, Miss.
Bailey, Allen Martin	Unit Agriculture	Alabama City
Bailey, Norborne Foster	Radio	Demopolis
Baker, Robert Haden	Unit Agriculture	Gadsden
Baldwin, Moses Shafner	Applied Elec.	Midland City
Barnes, William Burton	Unit Agriculture	Fayette
Bates, Willie Claud	Unit Agriculture	Ft. Deposit
Bergh, Erik	Vet. Medicine	Auburn
Betts, James Alonzo	Applied Elec.	Tallassee
Bilbrey, Elba Estors	Unit Agriculture	Vincent
Blackman, Arthur	Tractor	Warrior
Black, James Alvin	Agriculture	Natchez
Boatwright, Matthews Ozra	Agriculture	Mt. Willing
Bodiford, James Aubrey	Applied Elec.	Luverne
Boshell, Harvey Monroe	Agriculture	Nauvoo
Bowdin, Guy	Agriculture	Elba

Boyle, Connie Peter	Mech. Drafting	New Orleans, La.
Barnard, Badford Montgomery	Pre-Medical	Union Grove
Brame, Lee Madison	Unit Agriculture	Lawndale
Breedlove, James S.	Unit Agriculture	Opp
Bridges, Chester Cyrus	Agriculture	Notasulga
Brock, Benjamin Fred	Machinist	Clio
Brosemer, Peter Constantine	Unit Agriculture	Huntsville
Browne, John Allen	Unit Agriculture	Tuscaloosa
Brown, Robert Albert	Vet. Medicine	New Orleans, La.
Brown, Sherman K.	Tractor Mechanics	Creola
Bryan, Charles Jesse	Agriculture	Auburn
Bullard, Daniel Wesley	Unit Agriculture	Blountsville
Burks, Peter DeMarcus	Unit Agriculture	Renfroe
Burleson, Oscar Isaiah	Unit Agriculture	River Falls
Buxton, Samuel Evington	Machine Shop Practice	Selma
Byrd, Monte Middleton	Tractor Mechanics	Montgomery
Cain, John Calhoun	Machine Shop	Auburn
Calloway, Lemuel Berkley	Applied Elec.	Jasper
Campbell, Charles Watkins	Applied Elec.	LaFayette
Carlin, Jack	Sheet Metal	Glasgow, Scotland
Carroll, Martin Emory	Tractor Mech.	Enterprise
Carter, A. Z.	Unit Agriculture	Pyriton
Carter, John Freeman	Agriculture	Birmingham
Clark, James Gordon	Unit Agriculture	Gallant
Cole, William Clyde	Applied Elec.	Whigham, Ga.
Cook, Robert Louis	Unit Agriculture	Tallassee
Courtney, Roy Barnard	Applied Elec.	Selma
Crawford, Cleborne Walthal	Unit Agriculture	Eclectic
Cullen, Leslie Manfred	Unit Agriculture	Birmingham
Dabney, Malcolm Grant	Animal Husbandry	Auburn
Davis, Grady Woodfin	Agriculture	Tuskegee
Davis, James Dayton	Drafting	Andalusia
Day, George Washington	Agriculture	Clio
Deal, Joseph Nix	Unit Agriculture	Cottonwood
Dewberry, John M.	Radio	Birmingham
Duett, James Charles	Unit Agriculture	East Tallassee
Dyer, Luther Thomas	Agr. Education	Malone
Dyess, Alto Franklin	Unit Agriculture	Troy
Edwards, Herbert Giles	Vet. Medicine	Sylacauga
Edwards, Raymond Spencer	Pharmacy	Eclectic
Evans, Charles W.	Architecture	Dothan
Fant, John William	Unit Agriculture	Liberty
Faught, Sherman Elbert	Applied Elec.	Parrish
Fields, Hughie J.	Agriculture	Slocomb
Fiscus, Charles Ulysses	Vet. Medicine	Escataupa
Fletcher, Shelby	Pharmacy	Andalusia
Ford, Shelton	Unit Agriculture	Opelika
Freeman, Edgar Hubbard	Unit Agriculture	Vida
Freeman, John Isaac	Sheet Metal	Auburn
French, Cyril Green	Pharmacy	Brundidge
Frost, James Robert	Tractor Mech.	Montevallo
Fuller, Gordon	Tractor Mech.	Georgiana
Gallups, Pratt Isaac	Applied Elec.	Seale
Gamble, Robert Fulton	Applied Elec.	Headland
Gann, David Littleton	Unit Agriculture	Auburn
Garner, Franklin Monroe	Unit Agriculture	Bushnell, Fla.
Garrett, Daniel Payne	Unit Agriculture	Delta

Gilbreath, Junious	Unit Agriculture	Sylronia
Gillis, John Patrick	Two Yr. Elec.	Brewton
Gilmore, Glen Rupert	Unit Agriculture	Auburn
Grant, Raymond Thomas	Unit Agriculture	Guntersville
Gray, Jackson Thomas	Unit Agriculture	Opelika
Grumbles, David M.	Unit Agriculture	Hayneville
Gulledge, Luther E.	Applied Elec.	Auburn
Haden, William Wallace	Applied Elec.	Auburn
Hall, Orion Spencer	Tractor Mechanics	Hackleburg
Hamilton, James Edward	Unit Agriculture	Rogersville
Hammock, Willis Jerdon	Tractor Mech.	Union Grove
Hanson, John Henry	Pharmacy	Waverly
Haralson, Henry Hurndon	Unit Agriculture	Buffalo
Haraway, Bayless Shone	Pharmacy	Florence
Harrison, Gladden	Unit Agriculture	Montgomery
Hawkins, John	Tractor Mech.	Patsburg
Haynes, Pugh	Unit Agriculture	Letohatchie
Hendrick, Frank	Unit Agriculture	Greenville
Hicks, William Thomas	Applied Elec.	Graceville, Fla.
Hill, Russell Huston	Unit Agriculture	Bangar
Holland, Virgil DeLoach	Unit Agriculture	Horton
Hooker, Joseph Earl	Agriculture	Auburn
Hopkins, Charles Drennen	Applied Elec.	Birmingham
Howard, Grady	Unit Agriculture	Vinemont
Hughes, Jeff	Unit Agriculture	Auburn
Inzer, Ray R.	Unit Agriculture	Auburn
Jackson, Jefferson Reuben	Unit Agriculture	Clanton
Jarvis, Thomas William Otis	Unit Agriculture	Talladega
Johnson, Allie James	Vet. Medicine	Camp Hill
Johnson, Noah	Shop Practice	Auburn
Johnston, Thomas Duncan	Unit Agriculture	Montgomery
Jones, Warren C.	Unit Agriculture	Auburn
Justice, Herbert Russell	Unit Agriculture	Calcie
Keene, Taylor, Jr.	Unit Agriculture	Tuscaloosa
Keeton, James Lindsey	Unit Agriculture	Wheeler, Miss.
Kelly, Henry Grady	Unit Agriculture	Millerville
Kelley, Samuel Leon	Unit Agriculture	Birmingham
Kidd, John Pitts	Pharmacy	Camp Hill
Kime, John Harlin	Applied Elec.	Mayna, La.
Knott, Hartford VanBeuren	Tractor Mech.	Coffee Springs
LaGrange, Alcee Michael	Applied Elec.	Patterson, La.
Lambert, Joseph Frank	Applied Elec.	Buffalo
Lane, Hiram M.	Unit Agriculture	Toinette
Lasater, Marion Earl	Unit Agriculture	Madrid
LeMaster, John Ross	Elec. Eng.	Bridgeport
Lewis, Ulysses	Pharmacy	Birmingham
Lybrand, William Ora	Unit Agriculture	Dawson
Lynn, James Joseph	Unit Agriculture	Brewton
McClurkin, George Patterson	Applied Elec.	Anniston
McDaniel, Reuben Levi	Agriculture	Dozier
McDuff, Murphy Clemons	Applied Elec.	Huntsville
McGee, Jesse	Unit Agriculture	Chancellor
McGlamry, James G.	Unit Agriculture	Auburn
McLain, Henry H.	Tractor Mech.	Georgiana
McIntosh, William Daniel	Unit Agriculture	Chancellor
McMahan, Ottis Cyphus	Floriculture	Rawles Springs, Miss.
McNeill, Silsbee Lee	Mech. Eng.	Jemison

Maiden, Walter George	Unit Agriculture	Castleberry
Malone, George	Tractor Mech.	Auburn
Manci, Orlando Joseph	Unit Agriculture	Daphne
Mansel, Perry Eliza	Tractor Mech.	Grady
Mathis, William Woods	Unit Agriculture	Millport
May, Chester D.	Horticulture	Auburn
Mayo, George Herbert	Unit Agriculture	Hamilton
Mays, Aaron Robert	Unit Agriculture	Sweetwater
Meadows, James Herman	Unit Agriculture	Camp Hill
Miller, John Henry	Unit Agriculture	Haleyville
Miller, William Casper	Unit Agriculture	Georgiana
Mitcham, Curtis Eugene	Unit Agriculture	Troy
Mitchell, John D.	Unit Agriculture	Fayette
Montgomery, Charles Leroy	Applied Elec.	Montgomery
Mooneyham, Lester Lee	Agriculture	Clio
Morgan, John Tee	Unit Agriculture	Maplesville
Morris, William Chester	Engineering	Tusculumbia
Mullins, Felston	Vet. Medicine	Obion, Tenn.
Neely, Odie B.	Agr. Education	Clanton
Nordan, Charles L.	Architecture	Andalusia
O'Neal, Daniel Grady	Unit Agr.	Gordon
Osborne, James Thomas	Applied Elec.	Fairfax
Pace, Grover Cleveland	Unit Agriculture	Ashland
Page, Lester Arms	Applied Elec.	Samson
Parker, Benjamin	Unit Agriculture	Guntersville
Parker, Pitt	Unit Agriculture	Lincoln
Peek, Clifford Elijah	Unit Agriculture	Brantley
Pilkerton, Alvin Ward	Applied Elec.	Greensboro
Pittman, Lester Clyde	Unit Agriculture	Banks
Pollard, Vachel Alexander	Shop Work	Leesburg
Porter, Adam Largus	Applied Elec.	Sylacauga
Powell, B. C.	Tractor Mech.	Tallassee
Powell, Lacey Everett	Unit Agriculture	Auburn
Price, James Leon	Unit Agriculture	Shorters
Prather, John W.	Unit Agriculture	Dadeville
Pritchett, William Thomas	Unit Agriculture	Myrtlewood
Pullen, Flem	Unit Agriculture	Malvern
Rabby, Peter J.	Tractor Mech.	Auburn
Raley, William McLaurin	Applied Elec.	Auburn
Ray, Fred Marvin	Unit Agriculture	Ashland
Rayfield, Claud Constant	Vet. Medicine	Weogufka
Rey, Joseph Albert	Applied Elec.	New Orleans, La.
Robinson, William John	Drawing	New Orleans, La.
Rodgers, Walter Cairo	Unit Agriculture	Shorters
Rogers, F. A.	Unit Agriculture	Auburn
Salvo, Herman Henry	Unit Agriculture	Alexandria
Sands, Laurine Carson	Applied Elec.	Five Points
Sayers, William P.	Vet. Medicine	Birmingham
Scroggins, Rufus	Unit Agriculture	Louisville
Sharpe, Harry Grady	Unit Agriculture	Tallassee
Shirley, Floyd Hendrix	Pharmacy	Abbeville
Smart, Roy Woodward	Mech. Drafting	Norwood, O.
Smith, Amos	Unit Agriculture	Vincent
Smith, Roby Van	Unit Agriculture	Dadeville
Smitherman, Thomas Jefferson	Machine Shop Practice	Vance
Smothers, Graham McGrow	Applied Elec.	Vincent
Snider, Jerre E.	Unit Agriculture	Goshen

Spencer, John Milton	Vet. Medicine	Poplarville
Squires, William Jackson	Unit Agriculture	Peterson
Stephens, Leroy Greenberry	Unit Agriculture	Delta
Stewart, Howard Hillary	Tractor Mech.	Troy
Stewart, Percy Myron	Applied Elec.	Andalusia
Stokes, Roy	Applied Elec.	Auburn
Tait, Reginald L.	Unit Agriculture	Coy
Tatom, Fred DeLeon	Applied Elec.	Banks
Taylor, Owen Luther	Applied Elec.	Pratt City
Teague, Porter Anderson	Mech. Drafting	Auburn
Temerson, Charles Wesley	Pharmacy	Birmingham
Thigpen, Fred	Applied Elec.	Georgiana
Thomas, Hadon	Unit Agriculture	Galveston, Tex.
Thomason, Eliza Perry	Unit Agriculture	Grady
Thompson, Gideon Pitts	Pharmacy	Hurtsboro
Thorp, Hugh Hill	Unit Agriculture	Auburn
Threeton, Luther Earl	Architecture	Hammock, La.
Toole, John Franklin	Unit Agriculture	Auburn
Tucker, Ira	Unit Agriculture	Rutledge
Tuggle, Richard Henry	Mech. Drafting	Quinton
Turner, Roy	Unit Agriculture	Heflin
Vann, Shelby Alto	Unit Agriculture	Ashford
Veal, Franklin Dewey	Unit Agriculture	Troy
Walding, Grover Cleveland	Vet. Medicine	Midland City
Walker, Clarence Clifford	Unit Agriculture	Luverne
Walker, William Nathaniel	Tractor Mech.	Aimwell
Waller, William Isaac, Jr.	Unit Agriculture	Dickinson
Ward, Alva Barton	Unit Agriculture	Semmes
Ward, James John Franklin	Unit Agriculture	Kingston
Warren, Felix Dewey	Mech. Eng.	Albany
Warrick, William Howard	Floriculture	Webb
Watford, Amzie Beach	Tractor Mech.	Slocomb
Watkins, Rafe Arden	Architecture	Meridian, Miss.
Watson, Clyde	Civ. Eng.	Clayton
West, Cullen	Tractor Mech.	Baker Hill
Whisnaut, Eber	Unit. Agr.	Keenon
White, Leon Kirven	Sheet Metal Draft.	Roswell, N. Mex.
Williamson, Robert Winfred	Unit Agriculture	Millersville
Winkleman, John B.	Unit Agr.	Canyon, Tex.

SUMMARY

Post Graduates	4
Seniors	154
Juniors	156
Sophomores	262
Freshmen	280
Pharmacy	30
Pre-Medical	27
Special Students	55
Federal Rehabilitation Students	273
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	1241
Deduct names counted twice	46
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TOTAL	1195

ACCREDITED SCHOOLS

LOCATION	NAME OF SCHOOL	PRINCIPAL
Abbeville	Secondary Agr. School	G. H. Yeuell
Albany	High School	W. H. Templeton
Albertville	Secondary Agr. School	J. W. Letson
Alexander City	High School	J. M. Pearson
Aliceville	High School	E. A. Thomas
Alliance	High School	H. A. Fowler
Andalusia	High School	F. D. Dowdy
Anniston	High School	Theo. Rumble, Jr.
*Anniston	Noble Institute	Miss Margaret E. Lea
Ashland	Clay Co. High School	J. B. Gibbons
Athens	Secondary Agr. School	J. M. Atkinson
*Athens	Athens Col. Acad.	Miss Susan F. Leonard
Atmore	Escambia Co. High School	M. L. Orr
Attalla	Etowah Co. High School	J. I. Riddle
Auburn	Lee Co. High School	J. A. Parrish
Bay Minette	High School	Rowe Watson
Bessemer	High School	C. C. Mosley
Birmingham	Central High School	C. A. Brown
*Birmingham	Loulie Compton Sem.	Miss Hattie Morton
*Birmingham	Simpson School	J. M. Malone
Blountsville	Secondary Agr. School	J. B. Pennington
*Boaz	Snead Seminary	L. F. Corley
Boyles	Jefferson Co. High School	T. W. Smith
*Brewton	High School	W. I. Powers
Brewton	Downing Indus. Institute	J. M. Shofner
Brundidge	Pike Co. High School	V. V. Norton
Butler	Choctaw Co. High School	F. S. Ward
Camden	Wilcox Co. High School	W. J. Walker
Camp Hill	High School	B. H. Wyatt
Carbon Hill	High School	C. R. Weldon
Carrollton	High School	G. C. Watkins
Castleberry	Conecuh Co. High School	Sellers Stough
Center	Cherokee Co. High School	C. W. Phillips
Centerville	Bibb Co. High School	Ralph Thomas
Chatom	Wash. Co. High School	W. V. Luckie
Citronelle	High School	J. W. C. Brown
Clanton	Chilton Co. High School	S. E. Alverson
Clayton	High School	J. R. Ward
Clio	Barbour Co. High School	R. K. Hood
Collinsville	High School	T. N. Driskill
Columbia	Houston Co. High School	L. J. Thompson
Columbiana	Shelby Co. High School	J. R. Kimbrough
Crossville	Geraldine High School	Chas. L. Martin
Cuba	High School	C. W. Vaughn
Cullman	Cullman Co. High School	H. G. Dowling
Dadeville	Tallapoosa Co. High	R. E. Thompson
Daphne	Class B Normal School	H. H. Holmes
Decatur	High School	W. W. Benson
Demopolis	High School	Geo. S. Clark
Dothan	High School	W. F. Monk
Double Springs	Winston Co. High School	E. H. Dunlap
Eclectic	Elmore Co. High School	J. Chrietzberg
Elba	High School	B. L. Balch
Elkmont	Limestone Co. High School	W. L. Davis

LOCATION	NAME OF SCHOOL	PRINCIPAL
Ensley	High School	E. E. Smith
Enterprise	Coffee Co. High School	Wm. E. Snuggs
Eufaula	High School	H. L. Upshaw
Eutaw	High School	J. T. Blach
Evergreen	Secondary Agr. School	F. H. Chappelle
*Fairhope	School of Organic Ed.	Paul Nichols
Fayette	Fayette Co. High School	Ira Pegues
Five Points	High School	A. S. Scott
*Flat Rock	Flat Rock High School	L. C. Alverson
Floral	Covington Co. High School	J. E. Hendley
Florence	Coffee High School	J. M. Howell
Fort Deposit	Lowndes Co. High	C. A. Buffington
Fort Payne	DeKalb Co. High School	N. J. Callan
Gadsden	Disque High School	C. A. Donehoo
Georgiana	High School	H. N. Lee
Gordo	High School	E. L. Stough
*Greensboro	Southern Military Acad.	F. C. Shaw
Greenville	High School	Miss Ruth Feagin
Grove Hill	Clarke Co. High School	D. C. Trexler
Guin	Marion Co. High School	D. L. Hovater
Guntersville	Marshall C. High School	N. F. Greenhill
Gurley	Madison Co. High School	J. M. Laird
Haleyville	High School	Ernest E. Haines
Hamilton	Secondary Agr. School	S. H. Gibbons
Hartford	Geneva Co. High School	W. T. Tiller
Hartselle	Morgan Co. High School	J. H. Riddle
Headland	Henry Co. High School	J. J. Yarbrough
Heflin	Cleburne Co. High School	E. J. Landers
Highland Home	Crenshaw Co. High School	C. C. Slaton
Huntsville	High School	C. A. Lloyd
*Huntsville	Wills' School	R. P. Wills
Jackson	Secondary Agr. School	R. D. Powell
Jacksonville	High School	S. D. Smith
Jasper	Walker Co. High School	O. P. South
LaFayette	High School	Edward G. McGehee, Jr.
Lanett	High School	Frank P. Lee
Leeds	High School	J. L. Aders
Leighton	Colbert Co. High School	Robert Hudson
Lincoln	Talladega Co. High School	J. J. Moore
Lineville	Secondary Agr. School	W. H. McDaniel
Louisville	High School	J. L. Bates
Luverne	High School	J. D. Bradley
Marbury	High School	J. M. Conry
Marion	Perry Co. High School	K. G. Hoover
Midway	High School (James, P. O.)	G. R. Hall
Milltown	Chambers Co. High School	L. Leftwich
Mobile	High School	F. L. Grove
*Mobile	Acad. of the Visitation	Sister M. P. Doran
*Mobile	Knott School	Miss Elizabeth Knott
*Mobile	McGill Institute	Rev. Wm. A. Kerrigan
*Mobile	Spring Hill High School	Jos. M. Walsh
*Mobile	University Military School	J. T. Wright
Monroeville	Monroe Co. High School	Jas. A. York
Montgomery	Sidney Lanier High School	J. S. McCants
*Montgomery	Barnes School	E. R. Barnes
*Montgomery	Edgar's School	R. B. Edgar
*Montgomery	Margaret Booth School	Margaret Booth

LOCATION	NAME OF SCHOOL	PRINCIPAL
*Montgomery	Starke's Uni.-Home School	J. M. Starke
Moulton	Lawrence Co. High School	A. B. Murphree
Moundville	Hale Co. High School	M. M. Matthews
*Newton	Baptist Collegiate Ins.	Dr. J. A. Lowry
Notasulga	Macon Co. High School	Thos. S. Bugg
Odenville	St. Clair Co. High School	Wm. A. McGuff
Oneonta	Blount Co. High School	Elsworth Ellis
Opelika	High School	G. H. Stacy
Opp	High School	J. E. Cheatham
Oxford	Calhoun Co. High School	J. H. Graves
Ozark	High School	Floyd Collins
Pell City	High School	J. W. Hicks
Piedmont	Francis E. Willard High	Mary A. Craig
Pike Road	High School	Paul Houchell
Plantersville	Dallas Co. High School	J. L. Maulder
Prattville	Autauga Co. High School	Alma McGaugh
Ramer	High School	A. C. Anderson
Reform	Pickens Co. High School	R. E. Hodnette
Roanoke	Handley High School	L. L. James
Rockford	Coosa Co. High School	Curtis Matthews
Rogersville	Lauderdale County High	E. R. Stoker
Russellville	Franklin Co. High School	E. T. Bolding
Samson	High School	W. B. Speer
Scottsboro	Jackson Co. High School	J. O. Dickinson
Selma	High School	P. A. Munro
Sheffield	High School	J. W. Campbell
Sulligent	High School	J. A. Johnson
Sylacauga	Secondary Agr. School	E. Grigg Elcan
Talladega	High School	O. K. Weldon
Tallassee	High School	L. O. Kyzar
Thomaston	Marengo Co. High School	J. H. Sams
Thomasville	High School	Geo. P. Hunt
*Thorsby	Thorsby Institute	Miss Helen C. Jenkins
Town Creek	High School	Prewit Simms
Troy	High School	C. C. Greer
Tuscaloosa	High School	Miss Clara Verner
Tuscumbia	High School	H. B. Norton
Tuskegee	High School	James K. Hunt
Union Springs	High School	M. K. Johnson
Uniontown	High School	W. H. Venters
Vernon	Lamar Co. High	J. E. Middlebrooks
Wedowee	Randolph Co. High School	J. M. Cook
Wetumpka	Secondary Agr. School	H. C. McDonald
York	Sumter Co. High School	J. W. Vann

* Private Schools

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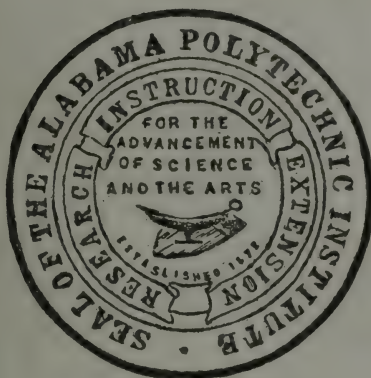
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No. 4

APRIL, 1922

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INSTITUTE**

JUN 18 1922
UNIVERSITY OF ALABAMA



CATALOGUE

1921-1922

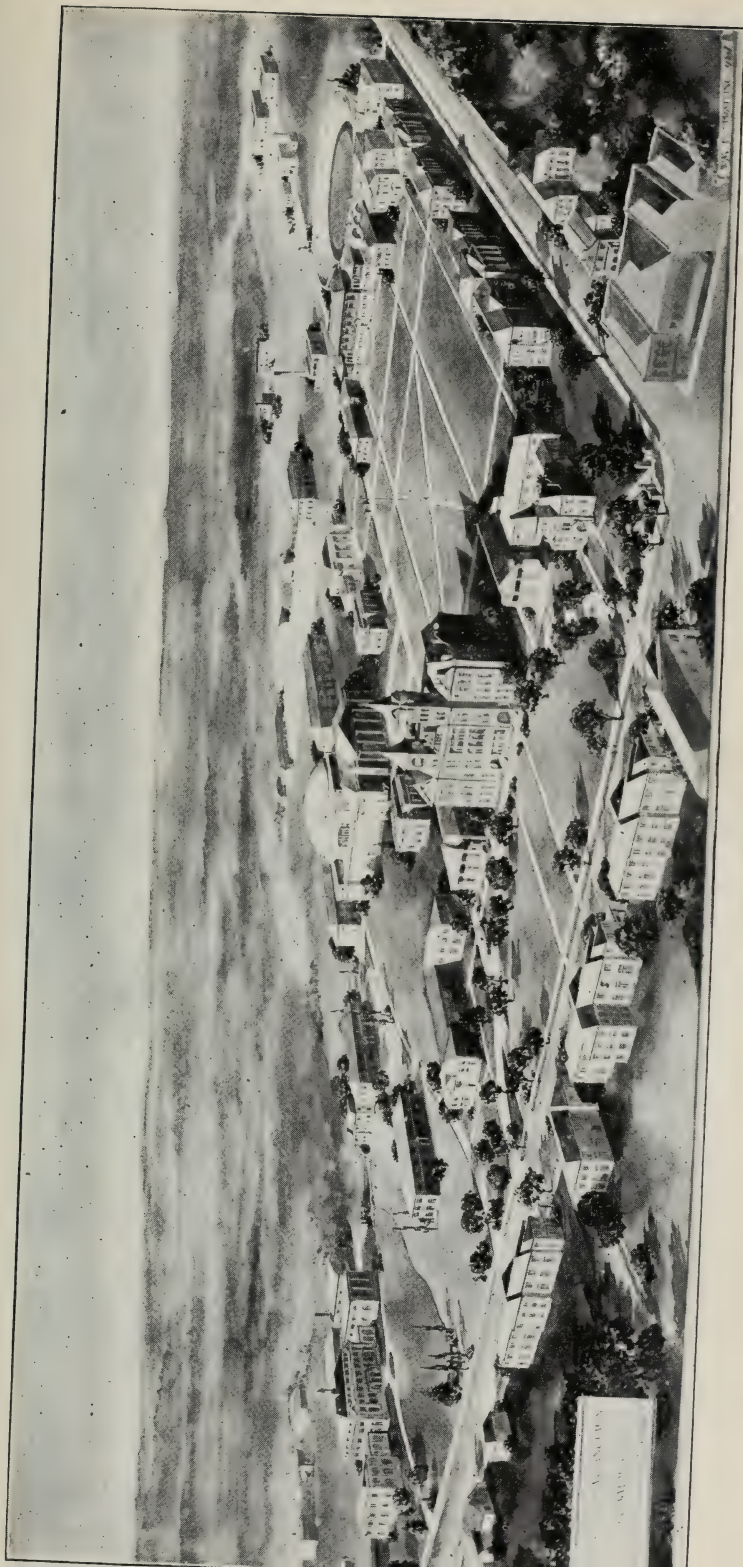
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1922-1923

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JANUARY TO JULY

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GREATER AUBURN
INCLUDING PROPOSED BUILDINGS

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OF
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POLYTECHNIC INSTITUTE
AUBURN, ALABAMA

STATE COLLEGE

FOR THE BENEFIT OF
AGRICULTURE AND THE MECHANIC ARTS

FIFTIETH SESSION
1921-1922

ANNOUNCEMENTS FOR 1922-1923

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COLLEGE CALENDAR

1922

June 5-July 14	First Summer Session
July 17-Aug. 25	Second Summer Session
Sept. 4-5	Registration and entrance examinations
Sept. 6	Class work of first semester begins
Nov. 15	Mid-semester grades reported
Nov. 11	Armistice Day
Nov. 30-Dec. 3	Thanksgiving Holiday
Dec. 21	Christmas recess begins at noon

1923

Jan. 3	Class work resumed, 8:00 A. M.
Jan. 20	Semester examinations begin
Jan. 26	First semester ends
Jan. 27	Second semester begins; registration
Feb. 22	Washington's birthday
April 1	Mid-semester grades reported
May 1	Field Day
May 17	Semester examinations begin
May 27	Commencement Sermon
May 28	Annual meeting of Board of Trustees; Alumni Day
May 29	Commencement Day

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Term Expires 1927

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- DONAHUE, MICHAEL JOSEPH, A. B., Yale
Director and Head Professor of Physical Culture and Instructor in Mathematics
- DUGGAR, JOHN FREDERICK, M. S., A. and M. College, Mississippi
Research Professor of Farm Management
- DUNCAN, LUTHER NOBLE, M. S., Alabama Polytechnic Institute
Professor of School Agriculture
- DUNSTAN, ARTHUR ST. CHARLES, M. E., Alabama Polytechnic Institute
Head Professor of Electrical Engineering
- FULLAN, MICHAEL THOMAS, M. E., Alabama Polytechnic Institute
Head Professor of Mechanical Drawing and Machine Design
- FUNCHESS, MARION JACOB, B. S., Clemson; M. S., Wisconsin
Head Professor of Agronomy
- GARDNER, WRIGHT AUSTIN, B. S., Albion College; A. M., Michigan; Ph. D., Chicago
Head Professor of Botany and Plant Physiology
- GRAY, DAN THOMAS, B. S., A. B., Missouri; M. S., Illinois
Head Professor of Farm Management
- GRIMES, JAY COOK, B. S., Tennessee; M. S., Kentucky
Head Professor of Animal Husbandry
- HARE, CLIFFORD LE ROY, M. S., Alabama Polytechnic Institute; M. A., Michigan
Professor of Physical and Physiological Chemistry

- HILL, WILLIAM WELCH, E. E., Alabama Polytechnic Institute
Professor of Electrical Engineering
- HINDS, WARREN ELMER, B. S., Massachusetts Agricultural College; Ph. D., Amherst
Head Professor of Zoology and Entomology
- HIXON, CHARLES ROBERT, M. E., Alabama Polytechnic Institute
Professor of Mechanical Engineering and Director of Shops
- HULSE, FRANK CLIFTON, Ph. B., Brown
Professor of Surveying
- HUTSELL, WILBUR H., B. S., Missouri
Professor of Physical Education
- JUDD, ZEBULON, Ph. B., North Carolina; A. M., Columbia
Head Professor of Education
- KILLEBREW, CINCINNATUS DECATUR, M. S., Alabama Polytechnic Institute
Professor of Mathematics
- MCADORY, ISAAC SADLER, B. S., Alabama Polytechnic Institute; M. D. C., McGillys Veterinary College
Professor of Veterinary Medicine
- MILLER, EMERSON R., Ph. G., B. S., Ph. C., M. S., Ph. M., Michigan; Ph. D., Minnesota
Professor of Chemistry
- NICHOLS, MARK LOVEL, B. S., Ohio State; M. S., Delaware College
Head Professor of Agricultural Engineering
- PETRIE, GEORGE, A. M., Virginia; Ph. D., Johns Hopkins
Head Professor of History and Latin
- ROSS, BENNETT BATTLE, M. S., Alabama Polytechnic Institute; LL. D., Emory
Head Professor of General and Agricultural Chemistry
- RUTLAND, JAMES RICHARD, M. S., Alabama Polytechnic Institute; A. B., Harvard
Professor of English
- SHI, BERNER LEIGH, M. S., C. E., Alabama Polytechnic Institute
Professor of Mathematics
- SPALDING, ISAAC, MAJOR, F. A., United States Military Academy
Commandant and Head Professor of Military Science and Tactics
- STARCHER, GEORGE COLUMBUS, B. S., West Virginia
Head Professor of Horticulture and Forestry
- STIVERS, ERNEST DE ROY, B. S., Iowa State College
Professor of Agricultural Education
- TAYLOR, RUPERT, A. M., Arkansas; Ph. D., Columbia; Cavaliere dell' Ordine della Corona d' Italia
Head Professor of English
- THOMAS, ALBERT LEE, M. E., Alabama Polytechnic Institute
Professor of Engineering Drawing
- WILMORE, JOHN JENKINS, M. E., Purdue
Head Professor of Mechanical Engineering
- WOOTEN, BENJAMIN ALLEN, E. E., Alabama Polytechnic Institute; M. A., Ph. D., Columbia
Head Professor of Physics
- WORLEY, GORDON, B. S., Alabama Polytechnic Institute
Professor of Agricultural Education

ASSOCIATE PROFESSORS

- EATON, WILLIAM H., B. S., North Carolina A. and E. College
Associate Professor of Dairying
- GREEN, HELEN LOUISE, B. S., Simmons; M. A., Columbia
Associate Professor of Home Economics
- ISELL, CHARLES L., M. S., Alabama Polytechnic Institute.
Associate Professor of Horticulture
- JOHNSTONE, GEORGE R., A. B., Illinois; M. S., Chicago
Associate Professor of Botany
- POVAH, ALFRED H. W., A. B., Ph. D., Michigan
Associate Professor of Plant Pathology
- POWELL, PARKER PRESTON, M. S., Alabama Polytechnic Institute
Associate Professor of Chemistry
- ROBINSON, JESSE MATHEWS, B. A., Miami; M. A., Ohio State
Associate Professor of Zoology and Entomology
- SAIDLA, LEO E. A., A. B., Wabash; B. D., Union Seminary
Associate Professor of English

ASSISTANT PROFESSORS

- BARLOW, HARRINGTON, A. B., S. B., Harvard
Assistant Professor of Architecture
- BASORE, CLEBURNE AMMEN; M. S., Alabama Polytechnic Institute; M. A., Michigan
Assistant Professor of Chemistry
- BEERS, VERE E., First Lieutenant, Corps of Engineers, United States Military Academy; C. E., Army Engineer School
Assistant Professor of Military Science and Tactics
- BURLESON, DAVID JASPER, B. S., Alabama Polytechnic Institute
Assistant Professor of Agronomy
- BROWN, OTTO, M. S., Alabama Polytechnic Institute
Assistant Professor of Horticulture
- BURNS, FRANCIS WILLIAM, B. S., Alabama Polytechnic Institute
Assistant Professor of Animal Husbandry
- COMPTON, LOUIS JOSEPH, Captain, Field Artillery, B. S., Vanderbilt
Assistant Professor of Military Science and Tactics
- COVINGTON, N. G., D. V. M., M. D. C., Pennsylvania
Assistant Professor of Physiology and Clinical Diagnosis
- FERGUSON, CHARLES W., D. V. M., Iowa State College; M. D. C., Chicago Veterinary College
Assistant Professor of Veterinary Medicine and Infectious Diseases
- FORTIER, LOUIS JOSEPH, B. E., Tulane, Captain, F. A.
Assistant Professor of Military Science and Tactics
- GENTRY, HOMER SAMUEL, Ph. C., Ph. G., Alabama Polytechnic Institute
Assistant Professor of Pharmacy
- GROVES, JASPER MORRIS, Captain, Infantry, A. B., Trinity
Assistant Professor of Military Science and Tactics
- GUYTON, FAYE ERASMUS, B. S., M. S., Ohio State
Assistant Professor of Zoology and Entomology

- HART, ROSWELL B., First Lieutenant, Infantry, United States Military Academy
Assistant Professor of Military Science and Tactics
- INGALLS, ROBERT D., Captain, Corps of Engineers, C. E., Cornell
Assistant Professor of Military Science and Tactics
- MARSH, GEORGE HENRY, M. S., Alabama Polytechnic Institute
Assistant Professor of Organic Chemistry
- MARTIN, HERBERT MARSHALL, M. S., Alabama Polytechnic Institute
Assistant Professor of Chemistry
- SUGG, REDDING STANCILL, B. S., D. V. M., Alabama Polytechnic Institute
Assistant Professor of Bacteriology, Histology and Pathology
- MOORE, ARCHIBALD BERNARD, A. B., M. A., Harvard
Assistant Professor of Modern Languages
- MOORE, EDWARD JAMES, B. S., Washington
Assistant Professor of Mechanical Engineering
- PARKER, FRANK WILSON, B. S., Alabama Polytechnic Institute; Ph. D., Wisconsin
Assistant Professor of Agronomy
- RANDOLPH, JOHN WILLOUGHBY, B. S., Illinois
Assistant Professor of Agricultural Engineering

INSTRUCTORS

- BIDEZ, PAUL RUBENS
Bandmaster
- CARLOVITZ, GILES HOMER, B. S., Alabama Polytechnic Institute
Instructor in Mechanical Engineering
- COOK, WILLIAM CLOUSTON
Instructor in Floriculture
- COOPER, ELVA LELAND, M. S., Alabama Polytechnic Institute
Instructor in English
- EASTER, EVERETT CHAMPIE, B. S., Alabama Polytechnic Institute
Instructor in Agricultural Engineering
- HANNA, VERNER CYRIL, B. S., C. E., Alabama Polytechnic Institute
Instructor in Mathematics and Drawing
- HOLLIFIELD, MARY KATHERINE, B. S., Alabama Polytechnic Institute
Instructor in English and Mathematics
- HUNT, JULIA BYROM, A. B., Young Harris College
Instructor in English
- JONES, DAN T.,
Instructor in Woodshop
- KIMBROUGH, WILLIAM DUKE, B. S., Alabama Polytechnic Institute
Instructor in Horticulture
- LAUDERDALE, ARTHUR ARMON, B. S., Alabama Polytechnic Institute
Instructor in Animal Husbandry
- McILVAINE, VICTOR CARYL,
Instructor in Electrical Engineering

- MASSENGALE, OLIVER NORFLEET, B. S.,
Instructor in Chemistry
 PITTS, JOHN EMMETT, E. E., Alabama Polytechnic Institute
Instructor in Mathematics
 POLLARD, ELISHA FREDERICK, M. S., Alabama Polytechnic Institute
Instructor in Chemistry
 REYNOLDS, ALFRED WADE, M. S., Alabama Polytechnic Institute
Instructor in History and Latin
 SPRATLING, WILLIAM PHILIP,
Instructor in Architecture
 TIDMORE, JAMES WALLACE, B. S., Alabama Polytechnic Institute
Instructor in Agronomy
 WHITE, GEORGE R., M. D., D. V. S.,
Lecturer on Animal Restraint and Surgical Operations
 WINTERS, EVERETT SOMPOYAC, B. S., D. V. M., Alabama Polytechnic Institute
Lecturer on Hog Cholera Serum

ASSISTANTS

- | | |
|------------------------------------|----------------------------------|
| BAILEY, JULIAN CLARK | <i>Physics</i> |
| BLASINGAME, HELEN, B. S. | <i>English</i> |
| CALDWELL, EDWARD GORDON, | <i>Zoology</i> |
| CALDWELL, ELBERT HAYS | <i>Zoology</i> |
| CHILDRÉE, LINNEY LEONIDAS | <i>Mathematics</i> |
| DAVIS, RICHARD ORRICK | <i>Civil Engineering</i> |
| FESTORAZZI, ANGELO OTTO, B. S. | <i>Drawing</i> |
| FORTIER, SOLIDELLE RENSHAW, A. B., | <i>French</i> |
| GARDNER, JUNIUS ROACH, B. S. | <i>Chemistry and Mathematics</i> |
| HENDERSON, WILLIAM HOBART | <i>Chemistry</i> |
| HOLLINGSWORTH, LAWRENCE MELTON | <i>Botany and Education</i> |
| HOWARD, HALL CALDWELL | <i>Civil Engineering</i> |
| HUNT, JAMES KARR | <i>Mathematics</i> |
| LOGAN, JAMES THOMAS | <i>Mechanic Arts</i> |
| LOONEY, JOHN BURROW | <i>Electrical Engineering</i> |
| MCDONALD, ERNEST P. | <i>Mechanic Arts</i> |
| MCDONALD, ROBERT VINCENT | <i>English</i> |
| MELTON, HENRY DALLAS | <i>Zoology</i> |
| MELVIN, HERBERT MARSHALL | <i>Zoology</i> |
| MIDDLETON, WALTER CONYINGTON | <i>English</i> |
| NEELY, THOMAS | <i>Radio</i> |
| PROCTOR, W. BRYAN | <i>Education</i> |
| RILEY, CLAYTON WESLEY | <i>Architecture</i> |
| SAMPLEY, ROY CHESLER | <i>Mechanic Arts</i> |
| SHAVER, ROSS OTIS | <i>Botany</i> |
| SPRATLING, SARAH AUGUSTA | <i>Zoology</i> |
| SMITH, HESTER MOORE | <i>Civil Engineering</i> |
| STEWART, DEWEY | <i>Botany</i> |
| STOUGH, KELLEY HOWARD | <i>Physics</i> |
| TRAPP, JOHN HERMAN | <i>Chemistry</i> |
| TRAWICK, ZACK TAYLOR | <i>History and English</i> |
| WELLBORN, SAMUEL COLVIN | <i>Architecture</i> |
| WEST, HARRY IRWIN | <i>Education</i> |
| WILSON, EARLE FREDERICK | <i>English</i> |
| WRIGHT, JOHN PEAVY | <i>History</i> |

FACULTY COMMITTEES

(The President is a member ex officio of all Committees)

Executive Committee

Petrie, Ross, Wilmore, Duncan, Gray, Cary, Taylor, Judd, Fisher, Funchess, Fullan.

Athletics

Hare, Crenshaw, Funchess, McAdory, Fullan.

Advisory Members—Coach Donahue, President of Athletic Club, President of Alumni Association, Captain and Manager of Football, Basketball, and Baseball teams. (Each captain and manager serves only during the period comprehended by each particular sport.)

Admission of Students

Shi, Wilmore, Cary, Ross, Taylor, Funchess.

Alumni Appointments

Dunstan, Wooten, Judd, Clark, McAdory, Marsh.

Boarding Houses

Baughman, Blake, Hill, Hulse, Powell, Beers.

Buildings and Grounds

Wilmore, Biggin, Callan, Gray, Starcher, Barlow.

Class Schedules

Biggin, Crenshaw, Gardner, Hixon, Reynolds, Martin.

College Publications

Clark, Wilmore, Judd, Shi, Saidla, Grimes.

Dramatic and Glee Clubs

Saidla, Taylor, Wooten, Fullan, Thomas, A. L., Bidez.

Dormitories

Fortier, Donahue, Clark, Dunstan, Miss Fisher, Pope.

Exhibits

Fullan, Isbell, Herron, Burns, Eaton, Miss Green.

Fraternities

Robinson, Starcher, Hixon, Grimes, Shi, Reynolds.

Health

Drake, J. H., Hinds, Blake, Hare, Gentry, Guyton.

Library

Petrie, Wilmore, Funchess, Saidla, Biggin, Miss Martin.

Literary Societies

Rutland, Atkinson, Saidla, Derr, Moore, E. J., Johnstone.

Moral Welfare

Ross, Stivers, Crenshaw, Bergthold, Burleson, D. J., Spalding.

Picture Show and Lyceum

Thomas, A. L., Rutland, Shi, Fisher, Baughman, Marsh.

Public Lectures

Judd, Petrie, Hinds, Taylor, Gardner, Bergthold.

Rehabilitation Students

Fullan, McAdory, Nichols, Brown, Miss Hollifield, Hanna.

Scholarships

Wooten, Petrie, Ross, Crenshaw, Clark, Chesnutt.

Social Life

Donahue, Miss Fisher, Fullan, Hare, Fortier, Hutsell.

Student Employment

Price, Thomas, A. L., Hill, Biggin, Sugg, Miss Fisher.

Student Publications

Taylor, Funchess, Fullan, Killebrew, Barlow, Moore, A. B.

Women Students

Misses Fisher, Green, Hollifield, Cooper, Martin, Mrs. Hunt.

Advisory Board—Mesdames Hinds, Petrie, Hill, Hare, Fullan, Clark.

Y. M. C. A.

Hinds, Cary, Ross, Duggar, Judd, Rutland.

EXPERIMENT STATION STAFF

SPRIGHT DOWELL, A. M., LL. D., President

DAN T. GRAY, A. B., M. S., Director of Experiment Station

JOHN P. BELL, Secretary

Agricultural Economy

J. F. Duggar, M. S., Agricultural Economist.

Agriculture

M. J. Funchess, M. S., Agronomist

E. F. Cauthen, B. S., Agriculturist

J. T. Williamson, B. S., Superintendent of Co-operative Experiments

H. B. Tisdale, B. S., Associate Plant Breeder

Chemistry

E. R. Miller, Ph. D., Chemist

O. N. Massengale, B. S., Assistant

Animal Husbandry

J. C. Grimes, M. S., Animal Husbandman

W. H. Eaton, B. S., Dairyman.

G. L. Burleson, B. S., Assistant

Agricultural Engineering

M. L. Nichols, M. S., Agricultural Engineer

Entomology

W. E. Hinds, Ph. D., Entomologist

F. L. Thomas, Ph. D., Associate

J. M. Robinson, M. A., Assistant

Horticulture

G. C. Starcher, B. S., Horticulturist

C. L. Isbell, M. S., Associate

Lyle Brown, B. S., Assistant

Botany

W. A. Gardner, A. M., Ph. D., Botanist

G. R. Johnstone, A. B., M. S., Associate

Plant Pathology

A. H. W. Povah, A. B., Ph. D., Associate Plant Pathologist

Veterinary Science

C. A. Cary, B. S., D. V. M., Veterinarian

Agricultural Editor

P. O. Davis, B. S., Agricultural Editor

AGRICULTURAL EXTENSION SERVICE

SPRIGHT DOWELL, A. M., LL. D., President

L. N. DUNCAN, M. S., Director

EMMETT SIZEMORE, B. S., Clerk

Name	Title
K. G. Baker, B. S. -----	Animal Husbandman
W. D. Barton, B. S. -----	District Agent
E. E. Binford, B. S. -----	District Agent
F. E. Boyd, M. S. -----	Agronomist
R. G. Briggs, M. A. -----	Potato Specialist
May I. Cureton -----	Assistant State Home Demonstration Agent
P. O. Davis, B. S. -----	Agricultural Editor
J. C. Grimes, M. S. -----	Animal Husbandman
W. Hardie, B. S. -----	Dairy Specialist
James L. Herron, B. S. -----	District Boys' Club Agent
J. T. High, B. S. -----	District Agent
W. E. Hinds, Ph. D. -----	Entomologist
Helen Johnston, M. A., -----	Assistant State Home Demonstration Ag't
L. C. LeBron, B. S. -----	Assistant Agricultural Engineer
Elizabeth Mauldin, B. A., -----	Assis't State Home Demonstration Ag't
M. L. Nichols, M. S. -----	Agricultural Engineer
M. H. Pearson, B. S. -----	Market Agent
A. H. W. Povah, Ph. D. -----	Plant Pathologist
T. A. Sims, B. S. -----	District Boys' Club Agent
G. C. Starcher, B. S. -----	Horticulturist
F. D. Stevens, B. S. -----	Farm Management Specialist
Gladys Tappan, B. Pd. -----	Assis't State Home Demonstration Agent
Mina A. Willis, M. S. -----	Assistant State Home Demonstration Agent
H. C. Wilson, D. V. M. -----	Hog Cholera Specialist
W. O. Winston, B. S. -----	District Agent

STATE REGULATORY SERVICE

SPRIGHT DOWELL, A. M., LL. D.

President

CHEMISTRY

ROSS, BENNETT BATTLE, M. S., LL. D.

State Chemist

HARE, CLIFFORD LEROY, M. S., M. A.

Associate Chemist

JACKSON, JAMES BAXTER, M. S.

Chief Analytical Chemist, Feeds, Fertilizers and Oils

MARSH, GEORGE HENRY, M. S.

Chief Analytical Chemist, Food, Drugs and Insecticides

BIDEZ, PAUL RUBENS

Assistant Chemist

MARTIN, HERBERT MARSHALL, M. S.

Assistant Chemist

BASORE, CLEBURNE AMMEN, M. S., M. A.

Assistant Chemist

MASSENGALE, OLIVER NORFLEET, B. S.

Assistant Chemist

POLLARD, ELISHA FREDERICK, M. S.

Assistant Chemist

HOG CHOLERA SERUM PLANT

CARY, CHARLES ALLEN, B. S., D. V. M.

State Veterinarian

WINTERS, EVERETT SOMPOYAC, B. S., D. V. M.

Manager

MCADORY, ISAAC SADLER, B. S., M. D. C.

Assistant

STATE BOARD OF HORTICULTURE

STARCHER, GEORGE COLUMBUS, B. S.

State Horticulturist

HINDS, WARREN ELMER, B. S., Ph. D.

Consulting Entomologist

COOK, WILLIAM CLOUSTON

Nursery Inspector

GENERAL INFORMATION

SCOPE OF ACTIVITIES

Purpose

The Alabama Polytechnic Institute is situated in the town of Auburn, fifty-nine miles east of Montgomery, on the line of the Western Railway of Alabama. The purpose of the institution is to provide, in accordance with the Acts of Congress and of the State of Alabama under which it is maintained, a liberal and thorough education, such as will afford the training required for efficient service in the different branches of industry in the application of science. All the practical work in the laboratories, in the shops, and on the farm is based on scientific principles. While industrial and technical work is emphasized, the importance of thorough general training and of culture is recognized in all the activities of the institution. In other words, the college aims to meet the demand for a broad general education, supplemented by adequate and appropriate technical training, adapted to the needs of its student body. In scope the work comprehends a broad field, including technical courses in the different phases of agriculture, engineering, architecture, pharmacy, veterinary medicine, agricultural education, home economics; the necessary training in the basic subjects of mathematics, and the natural and physical sciences; and general training in languages, history, economics, military tactics, and physical education.

Organization

The institution is organized for three major lines of service: Resident Teaching, Experiment Station, and Extension Service. Resident Teaching, which includes the work of teaching at the institution, is the oldest and perhaps the most distinctive feature of the college. The Experiment Station, by means of constant investigation and research, keeps the other two grand divisions in touch with the latest developments in science. The Extension Service, which is the clearing house of ideas, seeks to give currency throughout the State to the truths worked out by the Experiment Station and those used for Resident Teaching.

I. Resident Teaching

The instruction offered falls within seven divisions: (1) The College of Engineering and Architecture, (2) The College of Agricultural Sciences, (3) The Academic Departments, (4) The

College of Veterinary Medicine, (5) The School of Education, (6) The School of Chemistry and Pharmacy, and (7) The Department of Home Economics and Home Demonstration Work.

The College of Engineering and Architecture includes the following departments: (1) Civil Engineering, (2) Electrical Engineering, (3) Mechanical Engineering, (4) Highway Engineering, (5) Architectural Engineering, (6) Architecture, (7) Mechanical Drawing and Machine Design.

The work in the College of Agriculture is grouped as follows: (1) Agronomy, (2) Animal Husbandry, (3) Horticulture, (4) Veterinary Science, (5) Botany, (6) Entomology and Zoology, (7) Agricultural Chemistry, (8) Plant Pathology, (9) Agricultural Engineering.

The Academic Departments are as follows: (1) English, (2) Chemistry, (3) History, (4) Physics, (5) Botany, (6) Economics, (7) Modern Languages, (8) Latin, (9) Mathematics, (10) Drawing, (11) Mechanic Arts, (12) Military Science and Tactics.

The College of Veterinary Medicine comprises the following departments: (1) Veterinary Medicine, (2) Physiology, (3) Surgery, (4) Anatomy, (5) Therapeutics, (6) Pathology, (7) Histology, (8) Bacteriology, (9) Obstetrics, (10) Infectious Diseases, (11) Meat Inspection, (12) Milk Inspection, (13) Animal Husbandry.

The School of Education offers courses leading to the degrees of Bachelor of Science in Education and Bachelor of Science in Agricultural Education.

The School of Chemistry and Pharmacy offers courses leading to the degree of Bachelor of Science in: (1) Chemical Engineering, (2) Chemistry and Metallurgy, and (3) Pharmacy; and to the degree Pharmaceutical Chemist.

The Department of Home Economics offers courses leading to the degree, Bachelor of Science in Home Economics and in Home Demonstration Work.

II. Experiment Station

The Experiment Station was established under an Act of Congress of 1887 known as the Hatch Act, which was supplemented in 1906 by a subsequent Act of Congress known as the Adams Act. The popular work of the Experiment Station is research; that is, investigation and experiment, or, to be more specific, the discovery and publication of exact and detailed information pertaining to agricultural sciences and practice. While the work of teaching students at the institution is the most distinctive feature of the college, it cannot do this in

such a way as to promote the greatest social efficiency without the constant information and impetus which come from fresh, scientific investigation. The funds for the work of the Station come from both Federal and State appropriations, the amount from the latter source being all too meager. Research work is continually in progress in each department of the College of Agriculture, such subjects being selected as are of the greatest importance to the farmers of Alabama, in so far as resources and facilities permit. The testing and breeding of seeds (cotton, corn, oats, and all staple crops), the testing of fertilizers, the promotion of profitable production of beef, pork, poultry, and sheep, the conservation of soils, improved methods of cultivation, drainage, the use of improved farm implements—this incomplete catalogue of a few of the leading activities of the Experiment Station indicates the range and value of the work.

III. Extension Service

The Extension Service which is organized in keeping with the Federal Smith-Lever Act of 1914 is a cooperative effort to carry practical instruction in agriculture and home economics to the thousands of people throughout the State who for various reasons cannot take advantage of the regular courses offered at the college. Literally, it is an attempt to carry the college to the people of the State in the effort to improve home conditions and to secure better farm practice, including organization and management. The actual work of the service is carried on by specialists from the college, county farm demonstration agents, county home demonstration agents, boys' and girls' clubs, and by means of extension courses, publications, and correspondence.

While the emphasis in the past has been mainly with the individual farmer on his farm, we have now reached the point when this self-same farmer should be taught to become a real student of his problems and a community leader, to the end not only of increasing the net income, but also of making country life more attractive.

Summer Session

A twelve-weeks' summer session of the college comprising two terms of six weeks each is conducted annually beginning on Monday following Commencement Day.

The strongest faculty and a group of special lecturers of national reputation are engaged and courses are offered for prospective teachers, principals, superintendents, supervisors, vocational and agricultural teachers, college students desiring

college credit, religious leaders, home demonstration agents and high school students.

Women Students

Auburn is the oldest co-educational institution in the State and in the South with one exception, definite action having been taken by the Board of Trustees in 1892, since when women have been regularly in attendance. In addition to the regular college courses, all of which have been open to women on the same terms as men since 1892, a special course in home economics, particularly for the training of county home demonstration agents, is offered.

At the meeting of the Board of Trustees in February, 1921, the conversion of Smith Hall into a dormitory for women and an appropriation for that purpose were authorized. This is a handsome brick structure with running water in each room and the other modern conveniences. In it are housed the Dean of Women and other women members of the faculty.

The Dean of Women directs the interests of women students, both academic and social, and is a member of the faculty committees which have the direction of student organizations and activities. Women students are required to occupy the dormitory, or such private boarding houses as accommodate women students exclusively, and then only such as are accredited by the Dean of Women.

The Dean of Women invites correspondence with parents and guardians, as well as with prospective students. She will know every girl personally and counsel with her according to her individual disposition and needs. The advice of parents, both as to scholarship and discipline, will be constantly sought, and, as nearly as possible, equal regulations for dormitory girls and those living in accredited private homes will be enforced. By regular weekly visits to those in private homes and by frequent conferences she will keep in touch with the general problems and conditions.

Because of the limitations of facilities and the desire to do a high class of work, the attendance for the session of 1922-1923 will be limited to one hundred women. Smith Hall contains twenty-five rooms and two students will be expected to occupy each room. The monthly rental will be \$6.00 per student and reservations will be made only upon the payment of a month's rent in advance.

Vocational Rehabilitation

Out of the spirit of loyalty to the men who were in the service and in response to the requests of the United States

Veterans' Bureau, the resources of the college are placed within the reach of some two hundred wounded ex-service men who are in training here throughout the year. Approximately twenty-five per cent of the matriculates are enrolled in regular college classes, while three-fourths of them are taking special courses adapted to their previous training and needs. The college takes pride in cooperating cheerfully with the representatives of the Veterans' Bureau in the rehabilitation of disabled men, and the relations between the regular student body and the vocational men have been cordial. In addition to the regular college staff, the Veterans' Bureau maintains an office in the administration building of the college in which an advisor and a trained nurse are regularly employed. In this way all business matters concerning the college, the trainees, and the Veterans' Bureau are promptly and satisfactorily adjusted. Detailed information about the special work offered to vocational men is given in connection with the several courses.

Military Training

Instruction in military science and tactics is prescribed for all male members of the freshman and sophomore classes and first and second year students, except those with physical disabilities. Married students and also students over twenty-one years of age at the time of entering college who are permitted to devote their time to special study in chemistry, agriculture, pharmacy, veterinary medicine, etc., may be excused provided they take approved equivalent work.

Juniors and seniors who elect to take military training receive forty cents a day from the government during the entire year. Members of the junior and senior classes who do not take military training are required to take an approved equivalent.

Graduates of junior units of the Reserve Officers' Training Corps either in an essentially military school, or in a preparatory school, who have satisfactorily completed two or more years of the course will be given partial credit for the subject-matter covered. In order to obtain credit, students must submit detailed certificate as to the subjects covered signed by a school official and the Professor of Military Science and Tactics. No incoming freshman will be given credit covering an entire year or more of the military course, but will be given partial credits depending upon his standing in the junior unit and his demonstrated ability.

Religious Services

Convocation exercises are held every Saturday morning in Langdon Hall, the students being addressed by some outstanding business or professional man. Freshmen and sophomores and all first and second year students are required to attend.

The several churches of the town have strong ministers and while attendance at Sunday services is voluntary it is urged and expected that students will attend the church of their choice.

Each Sunday School has one or more Bible Classes for college men which are doing exceptionally fine work, while the several young people's societies and the Y. M. C. A. afford ready opportunities for religious training and service.

Young Men's Christian Association

The moral and Christian training of the students receives the earnest attention and thought of the faculty. The college has for many years been allied with the intercollegiate Young Men's Christian Association movement. The General Secretary is a man of broad culture and successful experience in Y. M. C. A. and religious work. The association exerts a vital and wholesome influence in the life of the college.

Students are advised to unite with the association when they enter the college.

Public Lectures and Entertainments

In addition to lectures by visiting speakers from time to time during the college session, the college provides a program including recitals by visiting musicians, lectures by well known thinkers, and other forms of entertainment for which the student pays a small fee.

When no other program interferes, carefully selected moving picture plays are available in the college auditorium for the recreation and entertainment of the students. Educational films of military, agricultural, economic, engineering or literary interest are shown weekly. Current events of international interest are shown twice weekly.

Honor System

During the session of 1910-11 the Honor System, which for years had been in effect in the higher classes, was adopted by the entire student body, to apply to all work done in classrooms and on examinations. Under this system the student is pledged neither to give nor receive any assistance, whatsoever.

All students upon entrance subscribe to the Honor System.

as in force at this institution. Proper regulations for administering the system have been adopted by the student body. The spirit of truth and honor, thus fostered in the examination room, is an efficient means of raising the scholarship, and tends to inculcate high ideals of honor among the students.

Examinations and Reports

At the end of each semester written examinations are held on the studies passed over that semester.

Reports giving the grade made by each student are sent to the parent or guardian.

Leaves of absence and honorable discharges will not be granted within two weeks of the examinations except for providential reasons.

Students must pass on each semester's work. In order to do this they must make 60 (Graduates 75) on the combination of class standing and examination. Each professor may combine the class standing and the examination grade in any proportion he chooses.

Mid-semester reports are made on November 15 and April 1.

On October 15, December 15, March 1, and May 1, each instructor shall report to the registrar for transmission to the appropriate deans the names of all students whose work or class attendance has been unsatisfactory during the previous month.

A student shall be placed on probation when these monthly or semester reports show that his work is unsatisfactory in as much as 40 per cent of his course expressed in semester hours. Probation notices will be sent to the student and to the parent or guardian. The student will remain on probation until the next regular reports are made, when

(1) His probation will be removed if he fails on less than 40 per cent of his work, (2) his probation may be continued if he shows decided improvement even though he fails on more than 40 per cent of his work, or (3) his resignation will be requested if he does not show improvement.

Deferred Examinations and Re-Examinations

All students taking examinations at times other than the regular semester examination period must present to the instructor concerned a card from the registrar showing that the student is eligible to take the examination.

A student absent from the semester examination on account of sickness or official or collegiate business may be given an examination at any time agreed upon by the professor concerned. A student absent from examination without such

satisfactory excuse may obtain a special examination only on an application endorsed by the professor and approved by the faculty. In either case the examination should be put at some period that does not conflict with the student's other college work.

A student whose semester grade falls below 50 will be required to repeat the semester's work in that subject in class, unless an application for a re-examination is endorsed by the professor and is approved by the faculty.

A failure with a grade of 50 to 59 on any semester's work shall be made up at any date set by the professor but within the next six months of the student's residence in college. If not passed off in this interval the course must be repeated in class. The re-examination should be given at some time during the third week of the next semester. If necessary, however, it may be set later by the professor. In either case it should be put at some period that does not conflict with the student's college duties.

Only one re-examination will be given. Seniors who fail in more than one subject of the second semester of the senior year will not be permitted to stand re-examination before Commencement. No re-examination of a senior class student who is applying for a degree may be held later than the Saturday just preceding Commencement Sunday.

The grade of the student who stands a re-examination and passes shall be recorded as 60.

Requirements for Graduation

Candidates for graduation must complete one of the prescribed degree courses with grades which will give at least as many *quality points* as twice the number of semester hours required for the degree.

The minimum passing grade is 60. Quality points are assigned to grades in accordance with the following scale:

Grades 95-100, 5 quality points for each semester hour.

Grades 90- 94, 4 quality points for each semester hour.

Grades 80- 89, 3 quality points for each semester hour.

Grades 70- 79, 2 quality points for each semester hour.

Grades 60- 69, 1 quality point for each semester hour.

Distinctions and Honors

Students in any class whose quality points amount to 90 per cent of the maximum number possible for their class are published as having attained *highest distinction*. Those whose quality points amount to 75 per cent of the maximum number

possible for their class are published as having attained *distinction*.

Graduation with honors is dependent upon the accumulation of points throughout the course. Seniors who attain 90 per cent of the maximum number of points possible for the entire course are published as *Graduates With Highest Honor*. Seniors who attain 75 per cent of the maximum number of points possible for the entire course are published as *Graduates With Honor*. Seniors who meet the graduation requirements, but do not attain honors, are published as *Graduates*.

Discipline Regulations

The government of the college is administered by the president and faculty in accordance with the code of laws and regulations enacted by the trustees.

Each student upon entering is required to pledge himself to obey the rules and regulations of the college.

Attention to study and punctuality in attendance on recitations and all other duties are required of every student. Students are prohibited from having in their possession arms or weapons not issued for the performance of military duty, and also from using or causing to be brought into the college limits, intoxicating liquors.

Students are not permitted to participate in public entertainments or contests without previously obtaining the consent of the faculty.

No student who is on probation will be permitted to engage in athletic contests or other student activities.

A student who, on surgeon's certificate, is excused from any subject will be required to substitute other work approved by the faculty.

Instructors report to the registrar weekly the names of all students who have an excessive number of unexcused absences. Unexcused absences from class or laboratory work, in accordance with regulations adopted by the faculty, affect the academic record of the student as follows:

- (1) Each unexcused absence in a subject will reduce the student's final grade for the semester in that subject.

- (2) Students who are absent without excuse as much as ten per cent of the total number of class or laboratory periods in any subject during a semester shall have the credit allowed for that subject reduced. Credit forfeited by absences must be made up by taking additional courses before graduation.

- (3) Students who are absent without excuse from more than twenty per cent of the total number of class or laboratory periods in any subject during a semester will not be permitted

to take the examination and will be required to repeat the subject in class and pass the examination before receiving credit.

The above regulations are administered on the basis of a scale of absences and additional credits announced by the faculty.

As many absences in any subject may be excused as twice the number of class meetings per week, provided the absences are due to sickness of the student as reported by the surgeon, serious illness in the immediate family of the student requiring him to leave college, or leave of absence granted to the student as a representative of the college. In case of protracted illness the faculty reserves to the executive council the right to show the student further consideration.

A student whose work is *satisfactory* as reported by his instructors, may be granted a leave of absence to represent the college in one or more of the following activities: Athletics, band, orchestra, glee club, debating or oratorical contests, dramatic club, Y. M. C. A. conference, thesis work, inspection trip, stock judging contests, military inspection, and such other college activities as the executive council may approve.

Excuses for absences will be issued by the registrar and the student must present these excuses to his instructors within one week after the absences occur.

Each unexcused absence incurred within three days before or three days after an official college holiday will be counted as *two absences*. The following are the official holidays as listed in the catalogue: Thanksgiving Day, Christmas, February 22, and May 1.

Surgeon

The surgeon is required to be present at the college daily, to visit at their quarters the students who are reported sick, and to give all requisite medical attention without other charge than the regular fee.

Academic Year

The academic year for 1922-23 commences on Wednesday, September 6, 1922, and ends on Tuesday, May 29, 1923.

It is divided into two semesters: The first semester extends from the opening of the session to January 26; the second semester begins January 27 and continues to the end of the session.

Scholarships

The following scholarships have been established:

THE GRAYDON SCHOLARSHIP FUND OF \$3,000, established by the family of the late Augustus T. Graydon, of South Carolina, a loyal alumnus of the class of 1914.

SOUTHERN RAILWAY LOAN SCHOLARSHIP FUND OF \$1,000, established by the Southern Railway in memory of the late W. W. Finley, President of the Southern Railway.

THE HENDERSON LOAN SCHOLARSHIP OF \$100, established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE ALABAMA FEDERATION LOAN SCHOLARSHIP OF \$200 annually, established in 1917 by the Alabama Federation of Women's Clubs.

The conditions governing the award of this scholarship are as follows:

(a) The beneficiary shall be a young woman resident of Alabama, between the ages of 18 and 24 years, prepared to enter the junior class.

(b) She must be unable to complete her education without financial assistance.

(c) She must maintain the required standard in scholarship, attendance and conduct. Failing in any of these requirements, she may be replaced by another beneficiary appointed in the same manner.

(d) The beneficiary must be free from any other financial obligation.

(e) Repayment of this loan shall be made at the rate of \$100 a year, without interest, the first payment becoming due the first year after graduation or resignation.

(f) The beneficiary shall signify her perfect understanding of these terms by signing a paper of agreement to be presented to her by the President of the Alabama Polytechnic Institute.

All applications should be sent to the Chairman of the Federation Scholarship Committee, Mrs. C. Clifford Adams, 3421 Willow Avenue, Birmingham, Alabama.

THE UNITED DAUGHTERS OF THE CONFEDERACY LOAN SCHOLARSHIP OF \$100, established in 1908 by the Alabama Division of the United Daughters of the Confederacy to be awarded by a committee of the Division to a descendant of a Confederate veteran.

THE BIRMINGHAM NEWS SCHOLARSHIP, covering the expenses of the beneficiary, established in 1921 by The Birmingham News, Birmingham, Ala.

Prizes

THE THOMAS ESSAY PRIZE, a gold medal offered by Hon. William H. Thomas, of Montgomery, Ala., for the best essay by an undergraduate student of the college. The essay must be written under the supervision of the Department of English.

The Alabama Chapter of the American Institute of Architects offers an Annual prize of Twenty Dollars' worth of Architectural Books, for excellence in Architectural Design, to students in the courses of Architecture or Architectural Engineering. The basis of the competition varies from year to year and is determined by the Department of Architecture, in consultation with the officers of the Alabama Chapter. 1921: *Samuel Colvin Wellborn*, Union Springs.

HORACE LANIER CASH PRIZES FOR COMPETITIVE DESIGN offered in 1922 and 1923 by Horace Lanier, President of the West Point Iron Works of West Point, Ga., to students submitting the best designs for problems suggested by the heads of the Departments of Architecture and Civil Engineering.

THE MILLER REESE HUTCHISON MEDAL FOR ENGINEERING WRITING: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison of Orange, N. J., to the member of the senior class who does the most satisfactory work in the course of Engineering Writing. The work must be done under the supervision of the Department of Machine Design. 1921: *John Burrow Looney*, Winchester, Tenn.

THE MILLER REESE HUTCHISON MEDAL FOR INVENTIVE DESIGN: A gold medal of appropriate design is offered by Dr. Miller Reese Hutchison of Orange, N. J., to the member of the junior class who does the most satisfactory work in the course of Inventive Design. The work must be original and must be done under the supervision of the Department of Machine Design. 1921: *Ernest Percy McDonald*, Auburn.

ORATORICAL PRIZE, Annual Inter-Literary Society Contest. 1921: *Leslie Newman*, Opelika, Ala.

PRIZE FOR BEST DEBATER, a medal given annually by the Board of Trustees to the best debater in the Wirt and Websterian Literary Societies. 1921. Wirt: *Richard Lester Haggard*, Gadsden.

PRIZE FOR BEST DECLAIMER IN LITERARY SOCIETIES. 1921. Wirt: *Edgar Franklin Harlin*, Roanoke, Ala.

REGIMENTAL MEDAL, for the best drilled soldier. 1921: *John Thompson Reed*, Washington, D. C.

PRIZE FOR BEST DRILLED COMPANY, a sword given by Board of Trustees. 1921: Engineer Company. *Captain Alexander Ogden Taylor*, Jacksonville, Fla.

PORTER CUP FOR BEST ATHLETE: 1921, *Edward Creech Sherring*, Butler County.

LIBRARY

The Library is kept open nine hours daily for the use of students as a reading room and is thus made an important educational feature. A number of new volumes has been added during the current session.

The O. D. Smith Collection

The library of the late Prof. O. D. Smith was presented to the college by Mrs. O. D. Smith, and is preserved as a memorial to his long and distinguished services to the college.

The F. D. Peabody Memorial Room

Through the generosity of Mr. George Foster Peabody, New York City, an annual fund of fifty dollars, income from a permanent investment, is available for the purchase of books and furniture for the "F. D. Peabody Memorial Historical Seminary." F. D. Peabody, Esq., was a distinguished graduate of the Class of 1876.

The W. D. Taylor Memorial Collection

The engineering library of the late W. D. Taylor, chief engineer of the Chicago and Alton Railway, was bequeathed by him to the Alabama Polytechnic Institute, and is preserved by the college as a memorial to this distinguished alumnus. Mr. Taylor was a graduate of the Class of '81 and was regarded as one of the leading civil engineers of the United States.

ALUMNI ASSOCIATION

The Auburn Alumni Association is an organization of the graduates and former students of the institution. A member of the association delivers the address on Monday of Commencement week, which is Alumni Day.

Officers

President, John V. Denson, '05, Opelika.

Orator, John McDuffie, '04, Washington, D. C.

Vice-Presidents

First District, O. D. Dumas, '96, Mobile, Ala.

Second District, George M. Wheeler, '99, Montgomery, Ala.

Third District, C. L. Hare, '91, Auburn, Ala.

Third District, Jacob A. Walker, '08, Opelika, Ala.

Fourth District, W. F. Johnston, '99, Anniston, Ala.

Fifth District, F. Lloyd Tate, '97, Wetumpka, Ala.

Sixth District, C. C. Johnson, '91, Marion, Ala.

Seventh District, C. S. Culver, '03, Gadsden, Ala.

Eighth District, J. E. Shotts, '17, Florence, Ala.

Ninth District, Charles A. Brown, '92, Birmingham, Ala.

Tenth District, Marvin Pearce, '98, Winfield, Ala.

Non-Resident Vice-Presidents

Leroy S. Boyd, '92, Washington, D. C.

Lee Ashcraft, '93, Atlanta, Ga.

R. T. Arnold, '01, Jacksonville, Fla.

O. E. Edwards, '94, New York City.

N. A. Burgess, '07, Pittsburg, Pa.

The Auburn Alumnus

The official organ of the Alumni Association is the Auburn Alumnus which is published once each month during the college session and once in the summer. The Secretary-Treasurer of the Association is the managing editor of the publication.

Scholarships

A scholarship fund is administered by the Alumni Association. For information address the Secretary, Auburn Alumni Association, Auburn, Alabama.

The following scholarships have been established:

THE WILLIAM LEROY BROUN MEMORIAL SCHOLARSHIP OF \$170, established by the Alumni Society, in memory of the late distinguished president of the Institute.

THE LIGON SCHOLARSHIP OF \$170, established by Col. R. F. Ligon, Montgomery, Ala.

THE THOMAS SCHOLARSHIP OF \$170, established by Judge William H. Thomas, Montgomery, Ala.

THE BALL SCHOLARSHIP OF \$170, established by Mr. Fred S. Ball, Montgomery, Ala.

THE DUNKLIN SCHOLARSHIP OF \$600, established by Mr. and Mrs. J. C. Street, Anniston, Ala., in memory of Prof. J. T. Dunklin, former professor of Latin in the college.

THE 1908 SCHOLARSHIP OF \$150, established by the Class of 1908.

THE RANSOM MEMORIAL SCHOLARSHIP OF \$125 per year, established by the Alumni Association in memory of the late Prof. A. McB. Ransom, is available for students in the junior and senior classes of the course in chemistry and metallurgy.

THE JEWISH LOAN SCHOLARSHIP OF \$1,000, established by a former student of the college.

THE HENDERSON LOAN SCHOLARSHIP OF \$100, established by Judge W. L. Henderson, of Miller's Ferry, Ala.

THE C. S. YARBROUGH SCHOLARSHIP OF \$1,000, established by Dr. C. S. Yarbrough, Auburn, Ala.

The scholarships enumerated above are loan scholarships, granted to worthy young men and women, to be returned after graduation.

THE ROBERT E. LEE MEMORIAL SCHOLARSHIP OF \$100, an annual donation for the son of a Confederate veteran, established by the Children of the Confederacy of Alabama under the auspices of Mrs. Mary G. Pickens.

HONOR SOCIETIES

Phi Kappa Phi Society

The Phi Kappa Phi Honor Society is a national honor society organized for the purpose of encouraging scholarship and original study among students. Seniors who make a high average on all subjects during the first three years of their course are eligible if they can meet requirements as to character and individual initiative as demonstrated by usefulness and prominence in worthy student and other collegiate activities. Leadership is given most consideration if students pass the scholarship requirements.

The society gives a prize of ten dollars to the sophomore student who has attended the Alabama Polytechnic Institute for two years and who has, in the opinion of the society, the best record in scholarship, character, and worthy student activities.

Tau Beta Pi Association

The Alpha Chapter of Alabama was established at the Institute in May, 1920. The purpose of the Association is "to mark in a fitting manner those who have conferred honor upon their Alma Mater by a high grade of scholarship as undergraduates, or by their attainments as alumni; and to foster a spirit of liberal culture in the Engineering schools of America." The Association holds two elections per year, the first

from the upper eighth of the junior class during the second semester, and the other from the upper fourth of the senior class during the first semester. Thus scholarship is the first requisite; but scholarship alone does not guarantee election—"liberal culture" is the attainment sought by the Association.

There are thirty-eight chapters in thirty-eight of the better engineering schools of the United States. To secure a chapter a school must be doing a high grade work and graduate not less than forty engineers each year. The chapter at the Institute is the first chapter to be established so far south as Alabama.

Gamma Sigma Delta

The Alabama Chapter of Gamma Sigma Delta, Honor Society of Agriculture, was installed at Alabama Polytechnic Institute in 1916. The society is a national one, with seven chapters, the only college in the South represented being Alabama Polytechnic Institute.

The object of the society is to encourage high standards of scholarship in all branches of agricultural science and education and a high degree of excellence in the practice of agricultural pursuits by the election to membership of those students of the senior and graduate classes in agricultural colleges who have shown exceptional ability during their undergraduate or graduate work, and of those alumni and faculty members who have rendered signal service to the cause of agricultural development.

The Alabama Chapter presents each year a loving cup to the best all-round junior in agriculture who meets the requirements in scholarship, student activities, and agricultural club attendance, personality and popularity.

Eta Kappa Nu

Xi Chapter of Eta Kappa Nu was established at Auburn in 1920. This national professional fraternity of electrical engineers was founded at the University of Illinois in 1904, the purpose being to bring into closer union for mutual benefit those men in the profession of electrical engineering who, by their attainments in college or in practice, have manifested a deep interest and marked ability in their chosen work.

Members are selected from junior and senior classes.

TECHNICAL AND LITERARY SOCIETIES

All students registered in the engineering division are eligible to membership in one or more of the technical and engi-

neering societies. The purpose of these organizations is to promote personal fellowship among the members and a closer affiliation with practical engineers. Prominent engineers are invited from time to time to address these bodies, either singly or in groups, and educational films, lantern slides, and discussions by student members make up the programs.

Electrical Engineers

The Student Branch of the American Institute of Electrical Engineers is carried on by students in the electrical engineering course. Meetings twice a month.

Mechanical Engineers

The Student Branch of the American Society of Mechanical Engineers is conducted by students in the mechanical engineering course. Meetings twice a month.

Civil and Highway Engineers

The Student Branch of the American Society of Civil Engineers is conducted by students in the civil and highway engineering courses. Meetings twice a month.

Chemistry

The Chemical Society was organized by students in chemical engineering and other chemical courses. Meetings twice a month.

Architectural Association

The Architectural Association is open to all members of the college who take work in the department of architecture. Weekly meetings are held in the architectural library. Papers are presented on subjects of professional interest, not directly covered in regular courses and current articles in the technical journals are also taken up. All members are encouraged to take part in the discussions that follow.

Agricultural Club

The Agricultural Club was organized in 1907. All students interested in agriculture and the agricultural sciences are eligible for membership. The members of the Agricultural Faculty take an active part in the work of the club. Meetings are held once a week, and an effort is made to promote interest in all lines of agriculture, to develop a spirit of good fellowship among the students of the course, and to bring them in contact with prominent workers of the science as opportunity offers to present them on the regular program.

Veterinary Medical Association

The Veterinary Medical Association was organized in 1907. The meetings are held bi-weekly in the veterinary building. Medical subjects are discussed by the members or by some invited speaker or member of the veterinary faculty. All students of veterinary medicine are eligible to membership.

The objects of the association are fraternal, intellectual and cultural. The annual banquet of this association is an occasion of good fellowship for the students, faculty, and veterinary alumni.

Pharmaceutical Association

The Pharmaceutical Association is an organization maintained by the students of the department of pharmacy. It aims to cultivate a spirit of fraternity and friendship among its members. Meetings are held bi-monthly. At these meetings the membership is usually addressed by local or visiting speakers. Student programs are also prepared. The annual banquet is held in April.

Literary Societies

There are three literary societies: the Wirt, the Websterian, and the Wilsonian. The Wirt and Websterian were organized in the East Alabama Male College in 1859-60. The Wilsonian was organized in the fall of 1919. The societies hold fall and spring contests in oratory, debating, and declamation.

To encourage the work of these societies the trustees directed in 1899 that a medal be awarded at each commencement to the best debater in each society. The college awards annually also a medal to the winner of the inter-society oratorical contest and a medal to the best declaimer in each society. The method of selecting the medal winners is determined by the faculty.

The Dramatic Club

The Dramatic Club is an organization of students interested in the presentation of plays and in the theater. Membership is open to all students who have had some acting experience and to those who show theatrical talent. Two plays were presented during the past session and another has been selected for presentation in the fall.

MUSICAL ORGANIZATIONS

Cadet Band

The Band is maintained by the college for students who wish to develop further their ability and for new students who wish to learn music. The band furnishes music for many college exercises and takes part in military maneuvers. Regular training which embodies instruction in the rudiments of music, in general musical information, and in the use of band instruments is given free of charge at band practice periods. College credit in lieu of R. O. T. C. work is allowed juniors and seniors. Private instruction may be secured by arrangement.

Membership is open to all students but is especially attractive to young musicians who have already had some training. Rewards are given to those who attain a recognized standing of loyalty and proficiency. Several scholarships are available for competent musicians.

Public concerts are given frequently and engagements in the state and other parts of the South are often scheduled. Requests for the band should be made through the President.

The Orchestra

The orchestra is an organization of students who play orchestral instruments, and its size is limited only by the attainments and proficiency of the applicants for membership. Besides furnishing music for college exercises, its members find many opportunities of earning appreciable sums by playing at banquets, dances and other entertainments.

In connection with the band and orchestra practice, courses are offered in harmony, composition, and music appreciation for those students who wish to take advanced work in music. A certificate of proficiency may be obtained for satisfactory progress in the course.

The Glee Club

The Glee Club is an organization of thirty to forty student musicians who are interested in chorus singing, quartet work and musical specialties of all kinds, including skill in playing stringed instruments not used in the band or orchestra. Training under a competent director begins early in the session and continues throughout the year. Several trips to towns in the state and to other states are made during the year and those who attain a recognized standing of proficiency and go with the club on these trips are given suitable rewards, including under certain conditions, a certificate of musicianship.

Requests for the Glee Club should be made through the director.

ADMISSION

All applicants for admission must present testimonials of good moral character and those who come from other colleges must bring certificates of honorable discharge or furnish other testimonials of good moral character.

Entrance examinations will be required of all new students except those who present certificates from accredited high schools or from colleges or universities.

The next session begins Wednesday, September 6. Registration and classification of students begin on Monday, September 4. Credits should be mailed during the summer, if possible, so that registration cards of new students may be prepared before registration begins. Applicants should make application to the registrar who will supply the necessary blanks for high school credits.

Registration after class work begins involves additional administration work and seriously affects the work of the student. An additional fee of \$1.00 per day will be charged for each day registration is delayed beyond September 5 and January 27, the maximum charge for late registration being fixed at \$5.00. No exception will be made to this regulation.

Entrance Requirements

The completion of a four-year course of at least *fifteen units* in an officially accredited high school or its equivalent as shown by examination is required for admission to the freshman class. Applicants will not be accepted as conditioned students.

The high school work of applicants for courses in engineering and architecture must include: English, three units; history, one unit; mathematics, two and one-half units (algebra $1\frac{1}{2}$, plane geometry 1). For admission to any other course, the specified units are the same as for courses in engineering and architecture except that only two units are required in mathematics (algebra 1, plane geometry 1). Applicants for a course in Latin must present three units in Latin.

Students in engineering and architecture who have not completed solid geometry in high school will be required to take this subject in college.

A unit is defined as a high school or preparatory course of five periods of forty to forty-five minutes each, weekly, throughout the academic year of nine months. In science courses, two laboratory periods are counted as the equivalent of one recitation period. No more than four units will be given for one year's work in the high school and no more than

one unit will be given for work done in any six weeks' summer school.

Credit for admission will be given for any high school subject properly taught.

The following is the maximum number of units in each subject that will be accepted:

English	4 units
Algebra	2 units
Plane Geometry	1 unit
Solid Geometry	$\frac{1}{2}$ unit
Trigonometry	$\frac{1}{2}$ unit
Social Sciences (history, civics, and economics.)	4 units
Physics	1 unit
Chemistry	1 unit
General Science	1 unit
Physical Geography	1 unit
Biology	1 unit
Modern Languages	2 units
Latin	4 units
Music	2 units
Freehand Drawing	2 units
Mechanical Drawing	2 units
Industrial Arts	2 units
Household Arts	2 units
Commercial Arts	2 units
Smith-Hughes Agriculture	1 to 6 units
Smith-Hughes Trades and Industries	1 to 6 units
Smith-Hughes Home Economics	1 to 6 units

Admission by Certificate

1. From accredited schools: Applicants from accredited schools will be admitted on presentation of official certificates covering the entrance requirements.

A list of accredited schools in Alabama is printed on the last pages of this catalogue. A student from any other state will be admitted by certificate only if his school is accredited by the university of his state. All students are advised to complete the full course given in their high schools before applying for admission to college.

2. From non-accredited schools: From non-accredited schools certificates covering the entrance requirements may be accepted, provided the applicant stands satisfactory examinations in the following subjects:

(1) Rhetoric and Composition	1 unit
(2) English Classics	1 unit

(3) Algebra	1 or 1½ unit
(4) Plane Geometry	1 unit
(5) Fourth-year English	1 unit
(6) One other fourth-year subject	1 unit

Admission by Examination

Applicants without satisfactory certificates as set forth above must stand examination on *fifteen units*, including the *required* subjects.

Admission From Other Colleges

Students coming from another college of similar rank will be assigned to the class and course to which they would belong in the institution which they have left, and will be required to make up only such back work as is necessary in order to carry on the regular studies of their class. In case they enter any other course they will be required to make up all work that they have not had.

Applicants for the B. S. degree must take the senior year's work in this institution.

Advanced Standing

Advanced standing or college credit is not given in any subject on high school credits. Advanced standing will be given for work done in other colleges of similar rank, or in other specially approved institutions.

Special Students

Mature students who are not able to meet the regular entrance requirements may be admitted as special students, not candidates for a degree, provided they are prepared to do satisfactory work in the subjects which they desire to take.

At least eight units of high school work are required for admission to the special course in pharmacy.

No one will be admitted as a special student unless he is twenty years of age. No special student will be admitted to a course in English unless he has three entrance units on that subject or to a course in mathematics unless he has entrance credit for two units in mathematics taken from algebra, plane and solid geometry. These entrance credits must be from an accredited school or by examination. Special students may become regular students by presenting satisfactory entrance credits.

Change in Course

Students who change from one regular course to another will be required to make up satisfactorily to the head of the

departments concerned all the work in the new course that they have not had. Permission to change from one course to another will be granted only at the beginning of a semester except in very urgent cases.

DEGREES

Each applicant for a degree may be required to write and submit a thesis on some leading subject connected with his course of study or, in lieu thereof, may conduct special laboratory or research work relating to such subject under the professor in charge in accordance with regulations prescribed by the faculty.

The degree, Bachelor of Science, is awarded upon the satisfactory completion of the following four-year courses: Civil Engineering, Highway Engineering, Electrical Engineering, Mechanical Engineering, Chemical Engineering, Chemistry and Metallurgy, Architecture, Architectural Engineering, Agriculture, Agricultural Extension, Education, Agricultural Education, Home Economics, Home Demonstration Work, Pharmacy, and the General Course.

The degree, Doctor of Veterinary Medicine (D. V. M.), is conferred upon the completion of the prescribed course in Veterinary Medicine.

The degree, Pharmaceutical Chemist (Ph. C.), is conferred upon the completion of the three-year course in Pharmacy.

A certificate will be given to those students who satisfactorily complete the special course in Pharmacy.

Each applicant for a degree must submit his application and course of study by the fifteenth of October in his senior year.

No degree will be conferred upon a candidate *in absentia* unless he is officially excused for providential reasons.

A candidate for a degree must, before May fifteenth of his senior year, show such ability to write clear and correct English as to satisfy the committee on students' use of English. To promote the habitual use of clear and correct English, the written work of every student in all his courses (theses, reports, quizzes, examination papers, etc.) is subject to inspection by the committee. If any student be found deficient, the committee will prescribe for him such work as in its judgment is proper, and this work must be done to the satisfaction of the committee before the student can obtain his degree.

Graduate Courses

A more extended course of study may be taken by a graduate of this institution or of any college of equal grade. The completion of a course which leads to a graduate degree of Master of Science requires one year's residence and the prosecution of a full course of study as approved by the faculty.

The candidate must also present to the faculty a satisfactory thesis showing independent investigation upon some subject pertaining to his course, and must pass an examination at the close of each semester on the course of study prescribed, in which he must attain a grade of 75 per cent. In addition to the regular written examination an oral examination is held in the presence of the faculty.

The subject of the thesis must be submitted to the faculty for approval prior to January 1, and the thesis given to the professor by May 1.

Applicants for graduate degrees and special students in post-senior studies are subject to the same general regulations as other students, but are exempt from all military duty.

The following courses are prescribed for the degrees named:

1. *Master of Science*.—Studies in three departments, in two of which the candidate must have previously completed the full course of the senior class; or, in special cases, with the approval of the faculty, a student may devote his full time to work in two departments, in each of which he has completed the full senior course.

2. *Master of Science in Pharmacy*.—Pharmacy and Chemistry.

Professional Degrees In Engineering

1. *Degrees in Course*.—The professional degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, or Chemical Engineer, will be conferred upon graduate students upon the satisfactory completion of the course of study prescribed, a residence of one year being required for the completion of those courses.

A written application stating the degree desired and the course of study selected must be submitted to the faculty at the beginning of the session. A satisfactory thesis must be submitted by May 1.

The following courses of study are prescribed for the degrees named:

Civil Engineer.—Civil engineering and any two subjects selected from the following: Mathematics, analytical mechanics, mechanical engineering, electrical engineering, bacteriology.

Electrical Engineer.—Electrical engineering and mechanical engineering, or electrical engineering, mathematics and civil engineering.

Mechanical Engineer.—Mechanical engineering and machine design, or mechanical engineering, mathematics and civil engineering.

Chemical Engineer.—Electro-chemistry and advanced analytical or organic chemistry, together with one or more subjects selected from the following: Mechanical engineering, machine design, electrical engineering.

II. Degrees for Professional Work.—The above-named professional degrees may be conferred upon graduates of the Alabama Polytechnic Institute in civil, electrical, mechanical, chemical and mining engineering upon complying with the following requirements:

1. The candidate must have spent at least four full years in the practice of that branch of engineering in which he graduated.

2. An approved thesis must be submitted to the faculty not later than May 1 of the year in which the degree is sought.

3. The student must show that he has filled satisfactorily a responsible position in charge of important engineering work. Written testimonials from employers or clients will be accepted as evidence of satisfactory service.

4. A written application, stating the degree desired, and giving a report or outline of the professional work upon which the application is based, must be submitted not later than January 1 of the year in which the degree is to be granted.

III. Special Students in Graduate Studies.—Students who are not graduates, but are qualified in special subjects to prosecute graduate studies, and desire to prepare themselves more thoroughly for professional or special work in any of the departments of engineering, chemistry, pharmacy, veterinary science, or other subjects in which instruction is given, may, when qualified, with approval of the faculty, enter this higher department of study and have all the privileges of graduate students.

A certificate of proficiency will be given when any one subject of a graduate course is satisfactorily completed.

Two degrees will not be given in the same year.

EXPENSES

Fees are payable in two installments, one-half at the beginning of each semester.

College Fees

The fees for the next session as fixed by the Board of Trustees are: Matriculation, incidental, library, and medical fees, \$25.00, payable in two installments of \$12.50.

Student-Activities Fee

This fee is \$11.00, of which \$6.00 is for admission to games played on the campus. The remainder is for the students annual, college paper and lecture course.

Non-Residents

An additional matriculation fee of \$25.00 each semester is charged students who are non-residents of Alabama. A student under 21 years of age once entering as a non-resident will not be permitted to claim residence unless his parent or guardian becomes a bona fide resident of Alabama and submits satisfactory affidavits as evidence. A student 21 years of age or over at the time of first entering college, and coming from another state, will not be permitted to claim residence until he becomes a qualified elector in Alabama, and in addition makes satisfactory affidavit that he is to become a bona fide resident of Alabama. The non-resident fee is remitted to sons of ministers.

Graduate Students

Graduate students who are employees of the college and devote only part of their time to studies pay the same fees for their first session as undergraduates, except that the student-activities fee is optional. After the first session, they pay a registration fee of \$5.00 each semester, the laundry and student-activities fees being optional.

Graduate students who are not employees of the college pay the same fees as other students.

Contingent Deposit

A contingent deposit of \$5.00 is required of each student on matriculation to cover any special or general damage to college property. General damages are assessed on the body of students. At the close of the session the contingent deposit, less charges, is refunded to the student.

Laundry

The authorities of the college have made contract for the laundry of all men students, the charge being \$12.00 a semester,

and each student must pay this fee on registration. Women students will make private arrangement for their laundry.

Laboratory Fees

In addition to the above, laboratory fees are charged in the various courses to cover cost of materials used and damage to equipment. The cost per student is dependent upon laboratory courses taken. The laboratory fees are shown on next page.

Diploma Fee

A diploma fee of \$10.00 is charged all students who receive a degree. This fee must be paid by Saturday preceding Commencement Day.

Boarding

Students board at the dormitories or with families of the town of Auburn. The cost of board and lodging varies from \$23.00 to \$30.00 per month. Students who desire to reserve rooms in the dormitories should make application before September 1, a deposit of \$6.00 being required to secure a reservation.

The Board of Trustees has authorized the use of Smith Hall as a girls' dormitory in which the Dean of Women and other women teachers reside.

On request the registrar will make reservations with private boarding houses.

Funds of Students

Parents or guardians are advised to deposit with the treasurer of the college funds desired for sons or wards, whether for college fees or board, or for any other purpose. It is the duty of this officer to keep safely all funds placed in his hands and to pay all expenses incurred by the students.

The college cannot be held responsible for the expenses of a student unless the funds are deposited under specific instructions from the parent or guardian to the treasurer. No student should be permitted to have a large amount of pocket money.

Amount to Be Paid on Registration

	1st Semester	2nd Semester
Fees (Matriculation, incidental, library and medical) -----	\$12.50	\$12.50
Student-Activities fee -----	5.50	5.50
Laundry (men students) -----	12.00	12.00
Contingent deposit -----	5.00	----
	<hr/>	<hr/>
For residents of Alabama -----	\$35.00	\$30.00

Non-residents of Alabama pay an additional matriculation fee of \$25.00 for each semester.

The contingent deposit of \$5.00 will be required in the second semester of students who were not registered during the first semester.

The above summary does not include laboratory fees.

The schedule of laboratory fees for each semester is shown below:

Course	Fresh.	Soph.	Junior	Senior
General	\$5.00	\$5.00	\$2.00	\$2.00
Home Economics and Home Demonstration Work..	5.00	5.00	5.00	5.00
Architecture	5.00	5.00	5.00	5.00
Architectural Engineering	5.00	5.00	5.00	5.00
Civil Engineering	6.00	5.00	6.00	2.00
Highway Engineering	6.00	5.00	6.00	4.00
Electrical Engineering	6.00	5.00	6.00	5.00
Mechanical Engineering	6.00	5.00	6.00	4.00
Chemical Engineering and Chemistry and Metallurgy ..	6.00	8.00	7.00	7.00
Agriculture and Agr. Extension	6.00	12.50	10.00*	---
Agricultural Education	6.00	12.50	10.00*	---
Secondary Education	6.00	6.00	5.00*	---
Pharmacy	6.00	15.00	15.00	10.00
Pre-Medical	10.00	10.00	---	---
Veterinary Medicine	11.00	15.00	6.00	3.00
	1st year	2nd year	3rd year	
Architecture	\$5.00	\$5.00	---	
Applied Electricity	5.00	8.00	---	
Wireless	5.00	---	---	
Pharmacy	15.00	15.00	15.00	

*Students who elect laboratory courses in the following departments will pay for each semester the laboratory fee indicated:

Agronomy	\$2.50
Agricultural Engineering	2.50
Botany	2.00
Entomology	1.00
Horticulture	1.00
R. O. T. C.	1.00

Special students will pay the laboratory fees of the group to which the major portion of their work belongs.

By order of the Trustees no fees are returnable except the unearned part of the laundry and contingent fees.

COURSES OF INSTRUCTION

The numbers immediately following the subjects of study refer to the courses offered in each department and described in another section of the catalogue under "Description of Courses." The numbers in columns indicate the hours per week.

English, German, French, Latin or Spanish may be taken as language in junior and senior classes, provided there is no conflict in schedule. Approved courses in education may be substituted for language in junior and senior classes in all courses.

COLLEGE FEES

(Corrected)

Student-Activities Fee

This fee is \$13.50, of which \$6.00 is for admission to games played on the campus. The remainder is for the students' annual, college paper, lecture course, and social and religious activities.

Amount to Be Paid on Registration

	1st Semester	2nd Semester
Fees (Matriculation, incidental, library and medical) -----	\$12.50	\$12.50
Student-Activities fee -----	6.75	6.75
Laundry (men students) -----	12.00	12.00
Contingent deposit -----	5.00	----
For residents of Alabama -----	\$36.25	\$31.25

Non-residents of Alabama pay an additional matriculation fee of \$25.00 for each semester.

The above summary does not include laboratory fees shown on page 44 of the Catalogue.

History 201-2, 203-4 -----	1	4	1	4
Physics 203-4, 207-8 -----	3	3	3	3
Psychology 201-2a -----	3		3	
Latin 201-2 or French or Science--	3		3	
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

English 301-2 -----	2		2	
Education 301-2 -----	2		2	
*History 303-4 -----		4		4
*Foreign Language -----	3		3	
Current Events, Hist. 305-6 -----	1		1	
American Government, Hist. 301-2	3		3	
Economics 301-2 -----	2		2	
Elective -----	4		4	

SENIOR CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 401-2 -----	2		2	
Education 401-2 -----	2		2	
*History 303-4 -----		4		4
*Current Events, Hist. 305-6 -----	1		1	
*Foreign Language -----	3		3	
Governments of Europe, Hist. 401-2 -----				
or Latin America, Hist. 405-6 ---	2		2	
Elective -----	7		7	

Students must have at least two years of modern language.

Stars indicate courses for which students may offer substitute without special permission of the dean.

Substitution may be made in exceptional cases by special permission of the Dean of the Academic Faculty.

Seniors in 1922-1923 must take Economics 301-2 as one of the elective subjects.

DEPARTMENT OF HOME ECONOMICS

COURSE IN HOME ECONOMICS

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Chemistry 101-2, 103-4 -----	3	2	3	2
Zoology 101 -----	2	2		
Botany 102 -----			2	2
Drawing, Arch. 121-2 -----		3		3
Water Color, Arch. 123-4 -----		3		3
Home Economics 101-2 -----	1	3	1	3
Social Ethics -----	1		1	
Physical Education -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
History 201-2 -----	1		1	
Chemistry 203, 211 -----	3	6		
Physiological and Food -----				
Chemistry 204, 212 -----			3	4
Physiology, Vet. 101 -----	3	1		
Physics 206 -----			3	
Bacteriology, Vet. 319 -----	2	4		
Home Economics 201-2 -----	1	6	1	6
Home Economics 204 -----				9
Physical Education -----				

JUNIOR CLASS

English 301-2 -----	2		2	
Home Economics 301-2 -----	1	6	1	6
Home Economics 303 -----	3			
Home Economics 305-6 -----	3		3	
Psychology 201a -----	3		3	
Economics 301-2 -----	2		2	
Elective -----			3	

SENIOR CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Home Economics 401-2 -----	3		3	
Home Economics 403 -----	3			
Home Economics 405-6 -----	1	6	1	6
Rural Sociology, Ed. 304 -----			3	
American Government, Hist. 301-2 --	3		3	
Education 401-2 -----	2		2	
Elective -----	3		3	

COURSE IN HOME DEMONSTRATION WORK

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Chemistry 101-2, 103-4 -----	3	2	3	2
Zoology 101 -----	2	2		
Botany 102 -----			2	2
Drawing, Arch. 121-2 -----		3		3
Water Color, Arch. 123-4 -----		3		3
Home Economics 101-2 -----	1	3	1	3
Social Ethics -----	1		1	
Physical Education -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
History 201-2 -----	1		1	
Chemistry 203, 211 -----	3	6		
Physiological and Food -----				
Chemistry 204, 212 -----			3	4
Physiology, Vet. 101 -----	3	1		
Physics 206 -----			3	
Bacteriology, Vet. 319 -----	2	4		
Home Economics 201-2 -----	1	6	1	6
Home Economics 204 -----				9
Physical Education -----				

JUNIOR CLASS

English 303-4 -----	2		2	
Home Economics 303 -----	3			
Home Economics 305-6 -----	3		3	
Home Demonstration 202 -----				3
General Entomology 301 -----	2	2		
Orchard Management, Hort. 201-2 --	1	2	2	2
Dairying, A. H. 201 -----	1	2		
Economic Entomology 302 -----			2	2
Vegetable Gardening, Hort., 302 --			2	2
Landscape Gardening, Hort. 301 --	2			

SENIOR CLASS

Economics 301-2 -----	2		2	
Home Economics 401-2 -----	3		3	
Home Economics 403 -----	3			
Home Economics 405-6 -----	1	6	1	6
Home Demonstration 301-2 -----	1	3	1	3
Home Demonstration 306 -----			1	
Home Demonstration 307 -----	1	2		
Home Demonstration 402 -----			1	2
Home Demonstration 403-4 -----	2		2	
Poultry, A. H. 302 -----	2			
Bee Culture, Ent. 408 -----			2	2

COLLEGE OF AGRICULTURE

COURSE IN AGRICULTURE

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Mathematics 101-2 -----	3		3	
English 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
History 101-2 -----	2		2	
Zoology 101-2 -----	2	2	2	2
Types and Breeds, A. H. 101-2 -----	1	2	1	2
Corn, Agr. 101 -----	1	2		
Plant Propagation, Hort. 102 -----			1	2
R. O. T. C. -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
History 201 -----	1			
Physics 203 -----	3			
Org. and Agr. Chemistry 201-2 -----	3		3	
Botany 201-2 -----	2	3	2	3
Chemical Lab., 207-8 -----	1	6	1	6
Small Grains and Weeds, Agr. 202 --			2	2
Dairying, A. H. 201 -----	1	2		
Live Stock Judging, A. H. 202 -----			1	2
Orchard Management, Hort. 201-2 --	1	2	2	2
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Required Work

Bacteriology, Vet. 319 -----	2	4		
Geology, Chem. 341 -----	3			
Entomology 301 -----	2	2		
Drainage and Terracing, Agr. Eng. 301 -----	2	3		
Animal Nutrition, A. H. 301 -----	3			
Vegetable Gardening, Hort. 302 --			2	2
Forage Crops, Agr. 302 -----			2	2
Farm Machinery, Agr. Eng. 302 --			2	3
Soils, Agr. 302 -----			2	2
Plant Physiology, Bot. 306 -----			2	3
Electives -----	5		6	

SENIOR CLASS

Required Work

Economics, Ec. 301-2 -----	2		2	
Genetics, Ent. 401 -----	2			
Gen. Farm Management and Rural Problems, Farm Man. 401 -----	3			
Business Law, Ec. 304 -----			2	
Electives -----	13		16	

COURSE IN AGRICULTURAL EXTENSION

The subjects in the freshman and sophomore classes are the same as those prescribed in the course in agriculture.

JUNIOR CLASS

Required Work

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Bacteriology, Vet. 319 -----	2	4		
Geology, Chem. 341 -----	3			
Entomology 301 -----	2	2		
Drainage and Terracing, Agr. Eng. 301 -----	2	3		
Animal Nutrition, A. H. 301 -----	3			
Public Speaking, Eng. 305 -----	2			
Veterinary Science, Vet. 101-2 ----	2	3	2	3
Vegetable Gardening, Hort. 302 ----			2	2
Forage Crops, Agr. 302 -----			2	2
Soils, Agr. 304 -----			2	2
Farm Machinery, Agr.-Eng 302 ----			2	3
Plant Physiology, Bot. 306 -----			2	3
Economic Entomology 302 -----			2	3

SENIOR CLASS

Required Work

Farm Management and Rural Problems, Farm Man. 401 -----	3		
Genetics, Ent. 401 -----	2		
Economics 301-2 -----	2	2	
Agricultural Journalism, Eng. 403-4	2	2	
Business Law, Ec. 406 -----		2	
Extension Methods, H. D. 307 ----		1	2
*Electives -----	11	12	1-3

*Students taking the course in agricultural extension will be expected to divide their electives approximately equally between animal husbandry, agronomy and horticulture.

Elective Courses

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4, 401, 408 -----	3		3	
Education 201-2, 301-6, 401-4 ----	3		3	
Modern Languages 101-2, 201-2 ----	3		3	
Veterinary Science, Vet. 102 ----	2	3	2	3
R. O. T. C. 301-2, 401-2 -----	2	3	2	3
Horse and Mule Management and Sheep Production, A. H. 304 ---			1	2
Milk Production, A. H. 302 -----			2	2
Systematic Botany, Bot. 307 -----	1	3		
Landscape Gardening, Hort. 301--	2			
Poultry, A. H. 303 -----	2			
Economic Entomology 302 -----			2	2
Adv. Farm Man. and Rural Eco- nomics, Farm Man. 402 -----			2	6
Beef Cattle Production, A. H. 401--	2	2		
Swine Production, A. H. 402 -----			2	2
Animal Breeding, A. H. 406-----			2	
Dairy Manufacturing, A. H. 403-4--	1	3	1	3
Farm Motors, Agr. Eng. 401-----	2	3		
Farm Buildings, Agr. Eng. 402-----			2	3
Fertilizers and Soil Fertility, Agr. 401 -----	2	3		
Special Soil Problems, Agr. 402---			1	2
Fiber and Sirup Crops, Agr. 403---	2	2		
Diseases of Plants, Bot. 409-----	2	3		
Plant Pathology, Bot. 410 -----			2	3
Methods in Plant Histology, Bot. 411	1	3		
Plant Physiology, Bot. 401 -----	1	3		
Ecology, Bot. 414 -----			1	3
Insect Control, Ent. 401 -----	2	2		
Sanitary Entomology 402 -----			2	2
Bee Culture, Ent. 408 -----			2	2
Economic Ornithology, Ent. 404 --			1	2
Micro-Technique, Ent. 405 -----		6		
Fruit Growing, Hort. 401-2 -----	3	2	3	2
Forestry, Hort. 403 -----	2			
Plant Breeding, Hort. 406 -----			2	
Floriculture, Hort. 405 -----	1	2		
Domestic Engineering, Agr. Eng. 403 -----	2	3		
Horticulture 407-8 -----	2	2	2	2

SCHOOL OF EDUCATION

COURSE IN AGRICULTURAL EDUCATION

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Mathematics 101-2 -----	3		3	
English 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
History 101-2 -----	2		2	
Zoology 101-2 -----	2	2	2	2
Types and Breeds, A. H. 101-2 -----	1	2	1	2
Corn, Agr. 101 -----	1	2		
Plant Propagation, Hort. 102 -----			1	2
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

Psychology, Ed. 201b -----	3			
Educational Psychology, Ed. 202b -----			3	
English 201-2 -----	3		3	
History 201 -----	1			
Org. Chemistry 201 -----	3			
Botany 201-2 -----	2	3	2	3
Chemical Laboratory, Chem. 207-8 -----	1	6	1	6
Small Grains and Weeds, Agr. 202 -----			2	2
Dairying, A. H. 201 -----	1	2		
Live Stock Judging, A. H. 202 -----			1	2
Orchard Management, Hort. 201-2 -----	1	2	2	2
R. O. T. C. -----	1	2	1	2

JUNIOR CLASS

Required Work

Introduction to Agricultural Education, Ed. 303 -----	3			
Rural Community Problems, Ed. 304 -----			3	
Bacteriology, Vet. 319 -----	2	4		
Entomology 301 -----	2	2		
Drainage and Terracing, Agr. Eng. 301 -----	2	3		
Animal Nutrition, A. H. 301 -----	3			
Vegetable Gardening, Hort. 302 -----			2	2
Forage Crops, Agr. 302 -----			2	2
Farm Machinery, Agr. Eng. 302 -----			2	3
Soils, Agr. 302 -----			2	2
Poultry, A. H. 303 -----			2	2
English Composition for Teachers, Eng. 311 -----	2			
Electives -----	3	1-3	3	1-3

SENIOR CLASS

Required Work

Principles of Secondary Education, Ed. 401 -----	2			
Methods of Teaching Secondary Subjects, Ed. 402 -----			2	
Methods of Teaching Vocational Agriculture, Ed. 407-8 -----	3	2	3	2
Practice Teaching, Ed. 412 -----			3	
General Farm Management and Rural Problems, Farm. Man. 401 -----	3			
English Composition for Teachers, Eng. 311 -----	2		2	
Electives -----	9	1-3	9	1-3

Junior and Senior Electives

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
History of Education, Ed. 301 -----	2			
Supervised Study, Ed. 302 -----			2	
Vocational Education, Ed. 305-6 --	2		2	
Practicums in Agricultural Education, 409-10 -----	2		2	
Genetics, Ent. 401 -----	2			
English, 305-6, 403-4 -----	3		3	
Business Law, Ac. 406 -----			2	
Veterinary Science, Vet. 102 -----	2	3	2	3
R. O. T. C., 301-2, 401-2 -----	2	3	2	3
Horse and Mule Management and Sheep Production, A. H. 304 ---			1	2
Milk Production, A. H. 302 -----			2	2
Systematic Botany, Bot. 307 -----	1	3		
Landscape Gardening, Hort. 301 --	2			
Economic Entomology 302 -----			2	2
Adv. Farm Man. and Rural Economics, Farm Man. 402 -----			2	6
Beef Cattle Production, A. H. 401--	2	2		
Swine Production, A. H. 402 -----			2	2
Animal Breeding, A. H. 406 -----			2	
Dairy Manufacturing, A. H. 403-4--	1	3	1	3
Farm Motors, Agr. Eng. 401 -----	2	3		
Farm Buildings, Agr. Eng. 402 -----			2	3
Fertilizers and Soil Fertility, Agr. 401 -----	2	3		
Special Soil Problems, Agr. 402 ---			1	2
Fiber and Sirup Crops, Agr. 403 --	2	2		
Diseases of Plants, Bot. 409 -----	2	3		
Plant Pathology, Bot. 410 -----			2	3
Methods in Plant Histology, Bot. 411	1	3		
Plant Physiology, Bot. 306 and 401--	1	3		
Ecology, Bot. 414 -----			1	3
Insect Control, Ent. 401 -----	2	2		
Sanitary Entomology, Ent. 402 ---			2	2
Bee Culture, Ent. 408 -----			2	2
Economic Ornithology, Ent. 404--			1	2
Micro-Technique, Ent. 405 -----		6		
Fruit Growing, Hort. 401-2 -----	3	2	3	2
Forestry, Hort. 403 -----	2			
Plant Breeding, Hort. 406 -----			2	
Floriculture, Hort. 405 -----	1	2		
Horticulture 407-8 -----	2	2	2	2
Domestic Engineering, Agr. Eng. 403 -----	2	3		

COURSE IN GENERAL SECONDARY EDUCATION

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
*Mathematics 101-2 -----	3		3	
Chemistry 101-2 -----	3	2	3	2
Zoology 101-2 -----	2	2	2	2
R. O. T. C. -----	1	2	1	2
Physical Education -----				
Electives: Agriculture, Home Economics, Modern Language -----	3		3	
*Women students may substitute Home Economics.				

SOPHOMORE CLASS

Psychology, Ed. 201a -----	3			
Educational Psychology, Ed. 202a -----				3
English, 201-2 -----	3		3	
Physics, 203-4, 205-6 -----	3	3	3	3
Botany 201-2 -----	2	3	2	3
R. O. T. C. 201-2 -----	1	2	1	2
Electives: Science, Agriculture, Home Economics, History, Modern Language -----	4		4	

JUNIOR CLASS

History of Education, Ed. 301 ----	2			
Supervised Study, Ed. 302 -----			2	
English Composition for Teachers, Eng. 311-12 -----	2		2	
Introduction to Agricultural Education, Ed. 303 -----	3			
Rural Community Problems, Ed. 304 -----			3	
Public Speaking, Eng. 305-6 -----	2		2	
History (Current Events) 305-6 --	1		1	
Entomology 301 -----	2	2		
Sanitary Entomology 402 -----			2	2
Electives -----	6		6	

SENIOR CLASS

Principles of Secondary Education, Ed. 401 -----	2			
Methods of Teaching Secondary School Subjects, Ed. 402 -----			2	
*Methods of Teaching Home Economics, H. E. 401-2 -----	2		2	
Vocational Education, Ed. 305-6 --	2		2	
General Farm Management and Rural Problems, Farm Man. 401 -----	3			
Observation and Practice Teaching, Ed. 404 -----			3	
English Composite for Teachers, Eng. 311-12 -----	2		2	
Electives -----	8		8	

*Required only of students specializing in Home Economics.

Junior and Senior Electives

Junior and senior electives may be chosen at will subject only to the general requirements that they shall fall within the pupil's field of specialization; that with the courses previously taken they shall give a minimum of twenty-four semester hours in agriculture and agricultural engineering for men, and twenty-four semester hours in home economics for women.

SCHOOL OF CHEMISTRY AND PHARMACY

CHEMICAL ENGINEERING

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 103-4 -----	5		5	
Chemistry 101-2, 103-4 -----	3	2	3	2
Heat Engines, M. E. 107 -----	2			
Surveying, C. E. 102 -----			2	3
Drawing 151-2 -----	4		4	
Shop, M. E. 101-2 -----		3		3
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Chemistry 205-6 -----	1	6	1	6
Physics 201-2 -----	3		3	
Advanced Inorganic Chemistry 214 -----			3	
Drawing 253 -----		6		
Shop Work, M. E. 214 -----				6
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

English 305-6 -----	2		2	
Applied Mechanics, M. E. 321 -----	3			
Engineering Chemistry 306 -----			2	
Organic Chemistry 303-4 -----	2		2	
Industrial Chemistry 301-2 -----	3		3	
Geology, Chem. 341 -----	3			
Economic Geology 342 -----			2	
Quantitative Analysis 307 -----	1	8		
Organic Preparations 308 -----			1	8
Mineralogy 331-2 -----		4		4
Electives -----	3		3	

SENIOR CLASS

French or German 301-2 -----	3		3	
Physical Chemistry 401 -----	5			
Metallurgy, Chem. 402 -----			5	
Historical Chemistry 405 -----	2			
Electrical Engineering 305-6 -----	2		2	
Gas Engines, M. E. 108 -----			2	
Quantitative Analysis 409, 410 -----	1	12	1	12
Metallurgical Laboratory 403-4 -----		2		2
Electives -----	3		3	

NOTE.—Students in this course who have taken a modern language in the junior year have the option of taking English or Economics in the senior year in lieu of German or French.

CHEMISTRY AND METALLURGY

Students in freshman and sophomore classes in this course may take either the course prescribed for students taking chemical engineering or the general course if Chemistry 205-6 is substituted for History 203-4.

JUNIOR CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 305-6 -----	2		2	
Engineering Chemistry 306 -----			2	
Organic Chemistry 303-4 -----	2		2	
Industrial Chemistry 301-2 -----	3		3	
Geology, Chem 341 -----	3			
Economic Geology, Chem. 342----			2	
Quantitative Analysis 307 -----	1	8		
Organic Preparations 308 -----			1	8
Mineralogy, Chem. 331-2 -----		4		4
Electives -----	5		3	

SENIOR CLASS

French or German 301-2 -----	3		3	
Physical Chemistry 401 -----	5			
Metallurgy, Chem. 402 -----			5	
Historical Chemistry 405 -----	2			
Food Chemistry 407-8 -----	2		1	
Bacteriology, Vet. 210 -----			2	4
Quantitative Analysis 409, 410----	1	12	1	10
Metallurgical Laboratory 403 -----		2		2
Elective -----	3		3	

Note.—Students in this course who have taken a modern language in the junior year have the option of taking English or Economics in the senior year in lieu of German or French.

PRE-MEDICAL COURSE

FIRST YEAR

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Chemistry 101-2, 105-6 -----	4	6	4	6
English 101-2 -----	3		3	
Freehand Drawing, Arch. 121-2 ----		3		3
Mathematics 101-2 -----	3		3	
Modern Language 301-2 -----	3		3	
Zoology 101-2 -----	2	2	2	2
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SECOND YEAR

Botany 201-204 -----	2	3	2	3
Organic Chemistry 203 -----	3			
Organic Preparations 209 -----	1	8		
Comp. Anatomy, Zoology 202 -----			1	6
English 201-2 -----	3		3	
Modern Language 401-2 -----	3		3	
Physics 203-4, 205-6 -----	3	3	3	3
R. O. T. C. 201-2 -----	1	2	1	2

THREE-YEAR COURSE IN PHARMACY

FIRST YEAR

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
Physiology 101 -----	3	1		
Chem. 101-2 -----	3		3	
Zoology 101-2 -----	2	2	2	2
Qual. Analysis, Chem. 105-6 -----	1	4	1	4
Pharmacy, 201 -----	5			
Pharmacy Laboratory 202 -----			2	6
Phar. Chem. 204 -----			3	
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SECOND YEAR

German or French 101-2 -----	3		3	
Physics 203-4, 207-8 -----	3	3	3	3
Botany 201, 204 -----	2	3	2	3
Org. Chem. Ch. 303-4 -----	2		2	
Quant. Analysis, Chem. 307 -----	2	9		
Pharmacognosy 304 -----			4	
Organic Chem. Lab., Chem. 308 --			1	8
R. O. T. C. 201-2 -----	1	2	1	2

THIRD YEAR

German or French 201-2 -----	3		3	
Pharmacy 301 -----	3	9		
Bacteriology, Vet. 210 -----			2	4
Pharmacognosy 403 -----	5			
Pharmacy 402 -----			2	4
U. S. P. 404 -----			4	
Presc. and Incomp. 405 -----	2			
Pharmacology 406 -----			3	
Phar. Testing and Drug Analy. 407	1	6		
Toxicology and Urinalysis, Chem. 414 -----			1	3
Electives -----	3		3	

FOUR-YEAR COURSE IN PHARMACY

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 101-2 -----	3		3	
Physiology 101 -----	3	1		
Chem. 101-2, 103-4 -----	3	2	3	2
Zoology 101-2 -----	2	2	2	2
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
Physics 203-4, 205-6 -----	3	3	3	3
Botany 201, 204 -----	2	3	2	3
Qual. Analysis, Chem. 205-6 -----	1	6	1	6
Pharmacy 201 -----	5			
Pharmaceutical Chemistry 204 ---			3	
Pharmacy Laboratory 202 -----			2	6
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

German or French 101-2 -----	3		3	
Organic Chemistry 303-4 -----	2		2	
Quantitative Analysis, Chem. 307--	2	9		
Organic Chemistry Lab. 308 -----			1	8
Pharmacy 301 -----	3	9		
Pharmacognosy 304 -----			4	
Bacteriology, Vet. 210 -----			2	4
Elective 301-2 -----	3		3	

SENIOR CLASS

German or French 201-2 -----	3		3	
Pharmacy 402 -----			2	4
Pharmacognosy 403 -----	5			
Pharmacology 406 -----			3	
Phar. Testing and Drug Assay 407--	1	6		
Presc. and Incompatibilities 405--	2			
U. S. P. 404 -----			4	
Food Analysis 409 -----	1	9		
Toxicology and Urinalysis, Chem. 414 -----			1	3
Research (Thesis) -----				5
Electives -----	3		3	

SPECIAL COURSE IN PHARMACY

FIRST YEAR

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Chemistry 101-2 -----	3		3	
Physiology 101 -----	3	1		
Botany 201, 204 -----	2	3	2	3
Qualitative Analysis, Chem. 105-6	1	4	1	4
Pharmacy 201 -----	5			
Pharmacy, Lab'y. 202 -----			2	6
Phar. Chem. 204 -----			3	
Pharmacognosy 304 -----			4	
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SECOND YEAR

Organic Chemistry 303-4 -----	2		3	
Pharmacy 402 -----			2	4
Pharmacognosy 403 -----	5			
U. S. P. 404 -----			3	
Bacteriology, Vet 210 -----			2	4
Pharmacy 301 -----	3	9		
Quantitative Analysis, Chem. 307	2	9		
Toxicology and Urinalysis, Chem. 414 -----			1	3
Presc. and Incompatibilities 405	2			
Pharmacology 406 -----			3	
R. O. T. C. 201-2 -----	1	2	1	2

COLLEGE OF ENGINEERING AND ARCHITECTURE

FRESHMAN CLASS

The following studies in the freshman class are prescribed in the courses in civil, electrical, highway, and mechanical engineering:

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 103-4 -----	5		5	
Chemistry 101-2, 103-4 -----	3	2	3	2
Heat Engines, M. E. 107 -----	2			
Surveying, C. E. 102 -----			2	2
Drawing 151-2 -----		4		2
Shop, M. E. 101-2 -----		3		3
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

CIVIL ENGINEERING

SOPHOMORE CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Physics Lab. 205-6 -----		3		3
Railroad Surveying, C. E. 201-----	2	2		
Topographic Surveying, C. E. 202--			2	2
Descriptive Geometry, Dr. 253----	2	4		
Graphic Statics, C. E. 206 -----			2	3
Topographical Drawing, C. E. 204--				2
R. O. T. C. 201-2 -----	1	2	1	2
Summer Vacation Work, C. E. 210--				

JUNIOR CLASS

Structural Details, C. E. 301 -----	1	2		
Roof Trusses, C. E. 302 -----			1	2
Applied Mechanics, M. E. 321 -----	3			
Strength of Materials, M. E. 322 -----			3	
Field Astronomy, C. E. 303 -----	2	2		
Hydraulics, C. E. 306 -----			3	
Highway Engineering, H. E. 301-2--	3		3	
Highway Laboratory, H. E. 303-4--		2		2
Geology, Chem. 341 -----	3			
Materials Engineering, C. E. 306--			1	2
Electives -----	6		7	
Summer Vacation Work, C. E. 310				

SENIOR CLASS

Theory of Structures, C. E. 401-2--	3		3	
Structural Design, C. E. 403-4----	1	3	1	3
Reinforced Concrete, C. E. 405----	3			
Concrete Design, C. E. 406 -----			1	3
Water Supply, C. E. 407 -----	3			
Sewerage, C. E. 408 -----			3	
Valuation, C. E. 409 -----	1			
Contracts and Spec., Dr. 475-----	1			
Railroad Engineering, C. E. 410--			2	
Seminar and Foundations, C. E. 411	1			
Graphical Charts, C. E. 413 -----	1			
Thesis, C. E. 414 -----			2	
Electives -----	5		6	
Inspection Trip, C. E. 416 -----				

HIGHWAY ENGINEERING

SOPHOMORE CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Physics Lab. 205-6 -----		3		3
Railroad Surveying, C. E. 201 -----	2	2		
Topographic Surveying, C. E. 202 -----			2	2
Descriptive Geometry, Dr. 253 -----	2	4		
Graphic Statics, C. E. 206 -----			2	3
Topographical Drawing, C. E. 204 -----				2
R. O. T. C. 201-2 -----	1	2	1	2
Summer Vacation Work, C. E. 210 -----				

JUNIOR CLASS

Structural Details, C. E. 302 -----	1	2		
Roof Trusses, C. E. 302 -----			1	2
Strength of Materials, M. E. 322 -----			3	
Applied Mechanics, M. E. 321 -----	3			
Materials of Engineering, C. E. 306 -----			1	2
Field Astronomy, C. E. 303 -----	2	2		
Hydraulics, C. E. 306 -----			3	
Highway Engineering, H. E. 301-2 -----	3		3	
Highway Laboratory, H. E. 303-4 -----		2		2
Geology, Chem. 341 -----	3			
Business Law, Econ. 304 -----			2	
Paving Assessments, H. E. 313 -----	1			
Electives -----	5		5	
Summer Vacation Work, C. E. 310 -----				

SENIOR CLASS

Theory of Structures, C. E. 401-2 -----	3		3	
Structural Design, C. E. 403-4 -----	1	3	1	3
Reinforced Concrete, C. E. 405 -----	3			
Concrete Design, C. E. 406 -----			1	3
Economic Geology, Chem. 342 -----			2	
Highway Engineering, H. E. 405-6 -----	3		3	
Highway Engineering, H. E. 407-8 -----		3		3
Contracts, Dr. 475 -----	1			
Valuation, C. E. 409 -----	1			
Seminar, H. E. 414 -----	1		1	
Thesis, H. E. 415 -----			1	
Electives -----	5		5	
Inspection Trip, C. E. 416 -----				

ELECTRICAL ENGINEERING

SOPHOMORE CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203, 204 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201, 202 -----	3		3	
Physical Laboratory 205-6 -----		3		3
Descriptive Geometry, Dr. 251-----	2	4		
Engineering Drawing 254 -----				4
Theory of Machines, Dr. 256 -----			3	
Shop Work, M. E. 213-4 -----		6		6
R. O. T. C. 201, 202 -----	1	2	1	2

JUNIOR CLASS

Electrical Engineering 301-2 -----	3		3	
Electrical Laboratory 313-4 -----	1	4	1	4
Applied Mechanics, M. E. 321 -----	3			
Strength Materials, M. E. 322-----			3	
Machine Design, Dr. 361-2 -----		4		4
Machine Design, Dr. 364 -----			1	
Graphic Statics, Dr. 355 -----	2			
Hydraulics, M. E. 346 -----			3	
Mechanical Laboratory, M. E. 331-2		2		2
Materials of Engineering, M. E. 347	2			
Electives -----	6		6	

SENIOR CLASS

Electrical Engineering 421-2 -----	5		5	
Electrical Laboratory, 425-6-----		3		3
Thermodynamics, M. E. 441 -----	3			
Power Plants, M. E. 442 -----			5	
Mechanical Laboratory, M. E. 451--		3		
Machine Design, Dr. 461 -----	2			
Electrical Railways 430 -----			2	
Electricity and Mag., Ph. 401-2----	2		2	
Electives -----	6		5	

MECHANICAL ENGINEERING

SOPHOMORE CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 203-4 -----	3		3	
History 201 -----	1			
Mathematics 201-2 -----	5		5	
Physics 201-2 -----	3		3	
Physical Laboratory 205-6 -----		3		3
Descriptive Geometry, Dr. 251 -----	2	4		
Engineering Drawing 254 -----				4
Theory of Machines, Dr. 256 -----			3	
Shop Work, M. E. 213-4 -----		6		6
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Applied Mechanics, M. E. 321 ----	3			
Strength Materials, M. E. 322 ----			3	
Machine Design, Dr. 361-2 -----		4		4
Machine Design, Dr. 364 -----			1	
Graphic Statics, Dr. 355 -----	2			
Hydraulics, M. E. 346 -----			3	
Mechanical Laboratory 331-2 -----		2		2
Materials Engineering, M. E. 347--	2			
Electrical Engineering 303-4 -----	3		3	
Electrical Laboratory 313-4 -----	1	4	1	4
Electives -----	6		6	

SENIOR CLASS

Thermodynamics, M. E. 441 -----	3			
Heating and Vent., M. E. 445 -----	2			
Refrigeration, M. E. 446 -----			2	
Hydraulic Machinery, M. E. 443 --	3			
Mechanical Laboratory, M. E. 451-2		3		6
Machine Design, Dr. 467-8 -----	2		2	
Machine Design, Dr. 469-470 -----		3		3
Industrial Management, M. E. 448--			2	
Power Plants, M. E. 442 -----			5	
Contracts and Spec., Dr. 475 -----	1			
Valuation, C. E. 409 -----	1			
Electives -----	6		6	

TWO-YEAR COURSE IN APPLIED ELECTRICITY

FIRST YEAR

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
Mathematics 103-4 -----	5		5	
Electrical Engineering 305-6 ----	3		3	
Electrical Laboratory 313-4 -----		4		4
Heat Engines, M. E. 107 -----	2			
Gas Engines, M. E. 108 -----			2	
Drawing 151-2 -----		4		4
Shop Work, M. E. 101, 102 -----		3		3
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SECOND YEAR

English 203-4 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
Electrical Engineering 431-2-3-4 ---	3	4	3	8
Drawing 253-4 -----		6		4
Electric Railways 430 -----			2	
Shop Work, 213-4 -----		6		6
Mechanical Laboratory, M. E. 234 --		2		
Telephone Engineering, E. E. 427-9	2	2		
R. O. T. C. 201-2 -----	1	2	1	2

SPECIAL COURSE IN WIRELESS TELEGRAPHY

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
Mathematics 103-4 -----	5		5	
Electrical Engineering 305, 306 ---	3		3	
Electrical Laboratory 313-4 -----		4		4
Wireless Telegraphy, E. E. 133-4 --	1	4	1	4
Heat Engines, M. E. 107 -----	2			
Gas Engines, M. E. 108 -----			2	
Drawing 151-2 -----		4		4
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

ARCHITECTURE

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2 -----	3		3	
History 101-2 -----	2		2	
Mathematics 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
Freehand Drawing, Arch. 121-2 --		3		3
Water Color, Arch. 123-4 -----		3		3
Descriptive Geometry, Arch. 141-2	1	3	1	3
Architectural Design, Arch. 191-2..	1	6	1	6
R. O. T. C. 101-2 -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
History of Architecture, Arch. 201-2	2		2	
Physics 201-2, 205-6 -----	3	3	3	3
Surveying, C. E. 205 -----	1	3		
Graphic Statics, C. E. 206 -----			2	3
Charcoal Drawing, Arch. 221-2 ---		3		3
Water Color, Arch. 223-4 -----		3		3
Building Construction, Arch. 271-2	2		2	
Architectural Design, Arch. 291-2..	1	9		9
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

History of Architecture, Arch. 301-2	2		2	
Applied Mechanics, M. E. 321 ----	3			
Strength of Materials, M. E. 322---			3	
French 301-2 -----	3		3	
Sketching, Arch. 321-2 -----		3		3
Clay Modeling, Arch. 325-6 -----		3		3
Plumbing and Drainage, Arch. 373	2			
Wiring and Illumination, E. E. 312			2	
Architectural Design, Arch. 391-2..		15		15
Electives -----	3		3	

SENIOR CLASS

History of Painting and Sculpture, Arch. 401-2 -----	1		1	
French 401-2 -----	3		3	
Life Class, Arch. 421-2 -----		3		3
Reinforced Concrete, C. E. 405 ----	3			
Fire Resisting Structures, Arch. 476			1	6
Heating and Ventilation, M. E. 445-	2			
Specifications and Contracts, Arch. 478 -----			2	
Architectural Design, Arch. ---491		21		21
Electives -----	3		3	

ARCHITECTURAL ENGINEERING

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2	3		3	
History 101-2	2		2	
Mathematics 103-4	5		5	
Chemistry 101-2, 103-4	3	2	3	2
Freehand Drawing, Arch. 121-2		3		3
Descriptive Geometry, Arch. 141-2	1	3	1	3
Architectural Design, Arch. 191-2	1	6	1	6
R. O. T. C. 101-2	1	2	1	2
Physical Training				

SOPHOMORE CLASS

English 201-2	3		3	
History of Architecture, Arch. 201-2	2		2	
Mathematics 201-2	5		5	
Physics 201-2, 205-6	3	3	3	3
Surveying C. E. 205	1	3		
Graphic Statics, C. E. 206			2	3
Charcoal Drawing, Arch. 221-2		3		3
Architectural Design, Arch. 291-2	1	9		9
R. O. T. C. 201-2	1	2	1	2

JUNIOR CLASS

History of Architecture, Arch. 301-2	2		2	
Applied Mechanics, M. E. 321	3			
Strength of Materials, M. E. 322			3	
Building Construction, Arch. 271-2	2		2	
Structural Details, C. E. 301	1	2		
Roof Trusses, C. E. 302			1	2
Sketching, Arch. 321		3		
Geology, Chem. 341	3			
Hydraulics, C. E. 304			3	
Materials of Engineering, C. E. 306			1	2
Architectural Design, Arch. 391-2		15		15
Electives	3		3	

SENIOR CLASS

Theory of Structures, C. E. 401-2	3		3	
Structural Design, C. E. 403-4	1	3	1	3
Reinforced Concrete, C. E. 405	3			
Concrete Design, C. E. 406			1	3
Foundations, C. E. 411	1			
Fire Resisting Structures, Arch. 476			1	6
Plumbing and Drainage, Arch. 373	2			
Heating and Ventilation, M. E. 445	2			
Wiring and Illumination, E. E. 312			2	
Water Supply, C. E. 407	3			
Sewerage, C. E. 408			3	
Specifications and Contracts, Arch. 478			2	
Electives	3		3	

SPECIAL COURSE IN ARCHITECTURE

FIRST YEAR

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
History of Architecture, Arch. 201-2	2		2	
Freehand Drawing, Arch 121-2---		3		3
Water Color, Arch. 123-4 -----		3		3
Clay Modeling, Arch. 325-6 -----		3		3
Descriptive Geometry, Arch. 141-2	1	3	1	3
Building Construction, Arch. 271-2	2		2	
Plumbing and Drainage, Arch. 373	2			
Wiring and Illumination, E. E. 312			2	
Architectural Design, Arch. 291-2--	1	9		9
R. O. T. C. 101-2 -----	1	2	1	2
Electives -----	4		4	
Physical Training -----				

SECOND YEAR

History of Architecture, Arch. 301-2	2		2	
History of Painting and Sculpture, Arch. 401-2 -----	1		1	
Charcoal Drawing, Arch. 221-2---		3		3
Water Color, Arch. 223-4 -----		3		3
Sketching, Arch. 321-2 -----		3		3
Life Class, Arch. 421-2 -----		3		3
Heating and Ventilation, M. E. 445-	2			
Specifications and Contracts, Arch. 478 -----			2	
Architectural Design, Arch. 391-2--		15		15
R. O. T. C. 201-2 -----	1	2	1	2
Electives -----	4		4	

COLLEGE OF VETERINARY MEDICINE

FOUR-YEAR COURSE

FRESHMAN CLASS

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
English 101-2	3		3	
Anatomy 103-4		4		10
Histology and Embryology 105-6 ..	2	4	2	4
General Chemistry 101-2	3		3	
Chemical Laboratory 105-6	1	4	1	4
Judging, A. H. 101-2	1	2	1	2
Physiology 101	3	1		
Clinics 107-8		3		3
R. O. T. C. 101-2	1	2	1	2
Physical Training				

SOPHOMORE CLASS

Anatomy 203-4		8		4
Bacteriology 209-10	2	4	2	4
Obstetrics 211	4			
Vet. Medicine 206			3	
Pharmacy 202			2	4
Vet. Physiology 201-2	3	2	1	2
Organic Chemistry 203	3			
Physiological Chemistry 204			3	
Clinics 207-8		6		4
Botany 206			2	3
R. O. T. C. 201-2	1	2	1	2

JUNIOR CLASS

Veterinary Medicine 307-8	3		3	
Clinical Diagnosis 315	2	2		
Shoeing 312			2	2
Surgery 304			3	
Parasites 309	3	2		
Infectious Diseases 310			3	
Anatomy 305-6		8		8
Clinics 317-18		8		8
Pathology 313	3	6		
Toxicology and Urinalysis, Chem. 414			1	3

SENIOR CLASS

Therapeutics 401-2	3		3	
Surgery 403-4	3		2	
Veterinary Medicine 405-6	3		3	
Surgical Exercises 408			1	3
Meat Inspection 409	3	2		
Milk Inspection 410			3	2
Breeding, A. H. 406			2	
Dairying, A. H. 201	1	2		
Clinics 411-12		8		10
Feeding, A. H. 301	3			
Thesis 413-14				

**SIX-YEAR COURSE LEADING TO B. S. DEGREE IN AGRICULTURE AT THE END OF FOURTH YEAR
AND D. V. M. DEGREE AT THE END
OF THE SIXTH YEAR
FRESHMAN CLASS**

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Mathematics 101-2 -----	3		3	
English 101-2 -----	3		3	
Chemistry 101-2, 103-4 -----	3	2	3	2
History 101-2 -----	2		2	
Zoology 101-2 -----	2	2	2	2
Types and Breeds, A. H. 101-2 -----	1	2	1	2
Corn, Agr. 101 -----	1	2		
Plant Propagation, Hort. 102 -----			1	2
R. O. T. C. -----	1	2	1	2
Physical Training -----				

SOPHOMORE CLASS

English 201-2 -----	3		3	
History 201 -----	1			
Physics 203 -----	3			
Organic and Phy. Chemistry 201, 204 -----	3		3	
Botany 201, 206 -----	2	3	2	3
Chem. Lab., Chem. 207-8 -----	1	6	1	6
Small Grains and Weeds, Agr. 202 -----			2	2
Dairying, A. H. 201 -----	1	2		
Livestock Judging, A. H. 202 -----			1	2
Orchard Management, Hort. 201 -----	1	2	2	2
R. O. T. C. 201-2 -----	1	2	1	2

JUNIOR CLASS

Bacteriology, Vet. 209-10 -----	2	4	2	4
Entomology 301 -----	2	2		
Histology and Embryology 105-6 -----	2	4	2	4
Drainage and Terracing, Ag. Eng. 301 -----	2	3		
Animal Nutrition, A. H. 301 -----	3			
Poultry, A. H. 303 -----	2			
Anatomy, Vet. 103-4 -----		4		10
Soils, Agr. 302 -----			2	2
Clinics, Vet. 107-8 -----		3		3
Forage Crops, Agr. 302 -----			2	2
Farm Machinery, Ag. Eng. 302 -----			2	3

SENIOR CLASS

Economics, Ec. 301-2 -----	2		2	
General Farm Management and Rural Problems, Farm Man. 401 -----	3			
Business Law, Ec. 406 -----			2	
Obstetrics, Vet. 211 -----	4			
Beef Cattle Prod., A. H. 401 -----	2	2		
Pharmacy, Phar. 202 -----			2	4
Breeding, A. H. 406 -----			2	
Vet. Medicine, Vet. 206 -----			3	
Horse and Mule Management, A. H. 304 -----			1	2
Anatomy, Vet. 203-4 -----		8		4
Swine Production, A. H. 402 -----			2	2
Vet. Phy., Vet. 201-2 -----	3	2	1	2

FIFTH YEAR

Subject	First Semester		Second Semester	
	Rec.	Lab.	Rec.	Lab.
Vet. Medicine 307-8 -----	3		3	
Surgery 304 -----			3	
Clinical Diag., Vet. 315 -----	2	2		
Shoeing 312 -----			2	2
Parasites 309 -----	3	2		
Infectious Diseases 310 -----			3	
Anatomy 305-6 -----		8		8
Clinics 317-18 -----		8		8
Pathology 313 -----	3	6		
Toxicology and Urinalysis, Chem. 414 -----			1	3

SIXTH YEAR

Therapeutics 401-2 -----	3		3	
Surgery 403-4 -----	3		2	
Vet. Medicine 405-6 -----	3		3	
Surgical Exercises 408 -----			1	3
Meat Inspection 409 -----	3	2		
Milk Inspection 410 -----			3	2
Clinics 411-12 -----		8		10
Electives -----	4		2	
Thesis 413-14 -----				

DESCRIPTION OF COURSES

ACADEMIC DEPARTMENTS

ECONOMICS

Professor Clark

301-2. Principles of Economics.—Sem. 1 and 2. Rec. 2.

A general survey of the processes of consumption, production, exchange, and distribution of wealth, combined with the study of land, labor, capital, money, interest, rent, wages, transportation and related subjects. (Required of agricultural seniors, juniors in general course, elective for seniors; open by special permission to sophomores.)

Professor Clark.

303. Economic Development of the United States.—Sem. 1.

Rec. 2.

An historical study of the economic development of the United States with special reference to resources, means of transportation and industrial development.

Professor Clark.

304. Business Law.—Sem. 2.

Rec. 2.

Theory and practice of business law, including cases. Contract, agency, sale, negotiable instruments, business associations, common carriers, and law of property.

Professor Clark.

401. Money, Credit and Banking.—Sem. 1.

Rec. 2.

Theory and history of money, credit and banking in the United States and in European nations.

Prerequisite: Economics 301-2.

Professor Clark.

402. Public Finance, and Financial History of the United States.—Sem. 2.

Rec. 2.

An analysis of the principles and practice of governmental revenues, expenditures, and debts, with particular reference to problems of taxation and the tariff in the United States.

Prerequisite: Economics 301-2.

Professor Clark.

ENGLISH

*Professor Taylor**Professor Rutland**Associate Professor Saidla**Instructors Hunt, Hollifield, Cooper**Assistants Blasingame, Wilson, Hardeman, Trawick,**McDonald and Middleton***101-2. English Composition.**—Sem. 1 and 2. Rec. 3.

A course in the fundamentals of English composition which is designed to teach the student the use of clear and correct English. Emphasis will be placed upon the mechanics of style and structure.

*Professors Taylor, Rutland, Saidla.**Instructors Hunt, _____.***104. English Composition.**—Sem. 2. Rec. 3.

Identical with English 101, but given in second semester.

*Assistants Trawick and Wilson.***201-2. Survey of English Literature.**—Sem 1 and 2. Rec. 3.

A course of readings in English literature of various periods with emphasis upon the human quality in literature.

Prerequisite: English 101-2.

*Professors Rutland, Saidla;**Instructors Hunt, _____.***301-2. Contemporary English Writers.**—Sem 1 and 2. Rec. 2.

An appreciative study of the literature of our own time. Required of juniors in the general course. Not given 1922-1923. Open to juniors and seniors in other courses as elective.

*Professor Rutland.***303-4. Contemporary European Writers.**—Sem. 1 and 2.

Rec. 2.

This course with course 301-302, attempts a survey of contemporary writers of Europe and America. Only those French, German, Scandinavian, Russian and Italian books which are available in translation will be assigned for reading.

Required of juniors in the general course. Open to juniors and seniors in other courses as elective.

*Professor Rutland.***305-6. Public Speaking.**—Sem. 1 and 2. Rec. 2.

This course aims to emphasize some of the fundamental principles of oral expression and to apply them to the speech of the individual through practice in the different forms of public speaking. Elective for juniors and seniors.

*Associate Professor Saidla.***307-8. Business Writing.**—Sem. 1 and 2. Rec. 2.

Practice in the preparation of reports, advertising copy, and general business correspondence.

Elective for juniors and seniors. Open to sophomores by special permission of the head of the English department.

Professor Rutland.

309-10. Advanced Engineering Writing.—Sem. 1 and 2. Rec. 2.

An advanced course for engineering students in the preparation of scientific papers, reports, contributions to technical periodicals, etc. Elective for juniors and seniors.

Professor Taylor.

311-12. English Composition for Teachers.—Sem. 1 and 2.

Rec. 2.

Required of juniors and seniors in Education.

Professor Taylor.

401-2. Studies in the Drama.—Sem. 1 and 2.

Rec. 2.

A study of Shakespeare's principal plays (401). Drama since Shakespeare (402).

Special emphasis will be given to the recent dramatic renaissance. Required of seniors in the general course. Open to juniors by permission.

Professor Taylor.

403-4. Journalism—General and Agricultural.—Sem. 1 and 2.

Rec. 2.

This course aims to train the student in the essentials of journalistic writing, and to apply those principles in writing articles for college publications and other journals.

Elective for juniors and seniors.

Associate Professor Saidla.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Instructors Hollifield and Cooper.

HISTORY AND LATIN

Professor Petrie

Professor Clark

Instructor Reynolds

Assistants Trawick and Wright

HISTORY**101-2. History of the United States.**—Sem. 1 and 2.

Rec. 2. Lab. 0.

This course covers the leading points in the industrial and constitutional history of our country from 1765 to 1921, emphasizing especially the recent period.

Professor Petrie; Instructor Reynolds; Assistants Trawick and Wright.

201. Recent History of Europe.—Sem. 1.

Rec. 1. Lab. 0.

The course touches the main points in the history of Europe from the Franco-Prussian War through the recent World War.

Professor Petrie; Instructor Reynolds; Assistants Trawick and Wright.

202. Present European Problems.—Sem. 2. Rec. 1. Lab. 0.
A study of problems arising from the World War and the Peace Conference.
Instructor Reynolds.

203-4. Historical Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 4.
Modern laboratory methods are here applied to the study of questions in the history of the United States since 1865.
Professor Petrie; Instructor Reynolds.

205-6. European History for Architects.—Sem. 1 and 2. Rec. 1.
The purpose of this course is to give the historical background for the history of architecture. It presupposes at least a brief high school course in European history.

301-2. American Government.—Sem. 1 and 2. Rec. 3.
An advanced course in the nature, theory and practice of national, state, and municipal government in the United States.
Professor Clark.

303-4. Historical Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 4.
Laboratory work is offered in United States history from 1865 to 1921.
Professor Petrie; Instructor Reynolds.

305-6. Current Events.—Sem. 1 and 2. Rec. 1. Lab. 0.
A study of events in the world today based on current periodicals.
Professor Petrie.

401-2. Governmente of Europe.—Sem. 1 and 2. Rec. 2. Lab. 0.
A comparative study of the governments of the leading countries of Europe both before and after the World War.
Instructor Reynolds.

403-4. Historical Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 4.
This is a continuation of the laboratory course in the junior class. The problems are taken from the same period of United States history. Especial emphasis is laid on finding and using new material.
Professor Petrie; Instructor Reynolds.

405-6. Latin America.—Sem. 1 and 2. Rec. 2.
An intensive study of the geographical, commercial, industrial, political, social and institutional life and history of the Latin-American countries, from the Colonial Revolt till today. Special attention will be given to the commercial and political relationship of the United States to Mexico, Central America, South America, and the Caribbean countries.
Professor Clark.

501-2. Economic History of the United States. (Graduate Course)—Sem. 1 and 2. Rec. 3 Lab. 6.
In this course the work is largely research in the economic history of the United States. In addition to this, laboratory work is required.
Professors Petrie and Clark; Instructor Reynolds.

LATIN

Latin is not required in any course, but is offered to those who wish it.

101-2. Cicero's Essays.—Sem. 1 and 2. Rec. 3. Lab. 0.

Especial emphasis is placed on the structure of the Latin language and its relation to the English language.

Instructor Reynolds.

201-2. Livy.—Sem. 1 and 2. Rec. 3. Lab. 0.

Especial attention is given to Latin composition.

Instructor Reynolds.

301-2. Livy. (Continued).—Sem. 1 and 2. Rec. 3. Lab. 0.

The course includes also a survey of Roman history and institutions.

Instructor Reynolds.

401-2. Horace and Latin Literature.—Sem. 1 and 2. Rec. 3.

Professor Petrie.

MATHEMATICS

Professor Crenshaw

Professors Derr, Killebrew, Shi

Instructors Pitts, Hanna, Hollifield

Assistants Carlovitz, Hunt, Childree

The courses of instruction offered in this department are designed to give the student a working knowledge of mathematics, so that he may be able to solve any of the ordinary problems that may arise in the study and pursuit of the engineering and scientific professions. At the same time, however, the principles of pure mathematics are in no wise neglected, and every effort is made to give the student that training in mental discipline for which the study of mathematics is so well fitted.

In calculus, particularly, a large part of the time is devoted to the solution of practical problems.

The course offered in the different classes in this department are as follows:

101. Advanced Algebra.—Sem. 1. Rec. 3.

102. Plane Trigonometry.—Sem. 2. Rec. 3.

103. Plane Trigonometry and College Algebra.—Sem. 1. Rec. 5.

104. College Algebra and Analytic Geometry.—Sem. 2. Rec. 5.

106. Plane Trigonometry and College Algebra.—Sem. 2. Rec. 5.

201. Differential Calculus.—Sem. 1. Rec. 5.

202. Integral Calculus.—Sem. 2. Rec. 5.

203-4. Accounting.—Sem. 1 and 2. Rec. 3.

301. Advanced Analytic Geometry.—Sem. 1. Rec. 3.

302. Advanced Calculus.—Sem. 2. Rec. 3.

401. Differential Equations. Part I.—Sem. 1. Rec. 3.

402. Differential Equations. Part II.—Sem. 2. Rec. 3.

404. Projective Geometry.—Sem. 2. Rec. 3.

Course 106 is the same as course 103 and is offered for the benefit of students entering at the beginning of the second semester.

Courses 203-4 are elective and will be offered to students who have completed either course 103 or courses 101 and 102.

Courses 301 and 302 are elective and will be offered to students who have completed 201 and 202.

Courses 401 and 402 are elective and will be offered to students who have completed 201 and 202.

Course 404 is elective and will be offered to students who have completed 201 and 202.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Instructors Hanna and Miss Hollifield.

MILITARY SCIENCE AND TACTICS

Major Spalding

Captains Ingalls, Fortier, Compton, Groves

First Lieutenants Beers, Hart

The Military Department is maintained under the Federal Law of July 22, 1861, and the Act of Congress, June 3, 1916. Under the latter law there have been organized units in field artillery, infantry, and engineers of the Senior Division of the Reserve Officers' Training Corps, and they are supervised by the War Department.

An officer of the regular army is detailed as Professor of Military Science and Tactics. By the appointment of the college authorities he is the Commandant of Cadets. He is assisted by six commissioned officers and a number of non-commissioned officers detailed from the army.

Rifles and equipment, various types of artillery, motor vehicles, and fifty horses are provided by the Government. A uniform is furnished by the Government for issue, by the college, to each member of the Reserve Officers' Training Corps. The uniform remains the property of the Government, and is for the use of the student only while he remains a member of the training corps.

The courses of instruction are graded courses, covering four years. When any member of the Senior Division of the Reserve Officers' Training Corps has completed two academic years in that division, and has been selected for further training by the president of the institution and by the professor of military science and tactics, and has agreed in writing to continue in the Reserve Officers' Training Corps for the remainder of his course in the institution, devoting five hours per week to the military training prescribed by the Secretary of War, and to pursue the prescribed course in camp training, he may be furnished by the United States with commutation of subsistence at such rate as may be fixed by the Secretary of War, during the remainder of his service in the Reserve Officers' Training Corps. At present this amounts to twelve dollars per month.

The course in camp training consists of one summer camp, not to exceed six weeks in length. Transportation to and from the camp and subsistence during such travel and while at the camp is furnished at the expense of the Government.

The object of the military training is to educate college men in the duties of a subaltern officer in the army. No obligation to perform military service after graduation is incurred by the student. Upon graduation from the Military Department the student may make application for appointment as a second lieutenant in the Officers' Reserve Corps.

The students are organized as a Battalion of Infantry, a Battalion of Field Artillery, and a Battalion of Engineers. The officers are selected as far as practicable from among the seniors and juniors who are pursuing the Advanced Course of the Reserve Officers' Training Corps. A student band furnishes music for parades and other ceremonies and on special occasions. Members of the Reserve Officers' Training Corps are authorized to serve in the band so long as their regular course of instruction is not interfered with.

FIELD ARTILLERY UNIT

101-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Construction and design of guns and howitzers; ammunition and fuses; fire control instruments; telephone and radio; gun squad drill; pistol practice; elementary gunnery.

Captain Fortier and Captain Compton.

201. Sem. 1.

Rec. 1. Lab. 2.

Motors and motor transportation; theory and design of gas engines, motor vehicles and tractors; practical instruction in driving motor vehicles.

Major Spalding and Captain Compton.

202. Sem. 2.

Rec. 1. Lab. 2.

Topography; hippology; mounted drill.

Major Spalding, Captain Fortier and Captain Compton.

301-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Field artillery; reconnaissance; communications; gunnery and firing; ballistics, accuracy of fire, preparation of firing data, observation and effect of fire. The conduct of fire both in open and stabilized warfare is studied on miniature terrains and on the smoke bomb range.

Hippology and practical instruction in equitation and horsemanship are given. The student exercises the command of a non-commissioned officer at mounted and dismounted drills.

Major Spalding, Captain Fortier and Captain Compton.

401. Sem. 1.

Rec. 2. Lab. 3.

Minor tactics including organization and tactics of the various arms. Duties of non-commissioned officers in mounted and dismounted drills.

Major Spalding.

402. Sem. 2.

Rec. 2. Lab. 3.

Military history and policy of the United States including a study of the more important campaigns and battles; military law.

Captain Compton.

INFANTRY UNIT

101-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Infantry drill regulations; principles and methods of instruction in close and extended order to include the schools of the soldier, squad, platoon and company; ceremonies; individual infantry equipment; practical and theoretical instruction in rifle marksmanship; scouting and patrolling; physical training; and military courtesy.

Captain Groves.

201-2. Sem. 1 and 2

Rec. 1. Lab. 2.

Sketching, including instruction necessary to make road, outpost, and position sketches; map reading; physical training; gallery rifle firing; instruction in the duties of non-commissioned officers; musketry, theoretical and practical; military hygiene, sanitation, and first aid; infantry weapons, including the rifle, automatic rifle, bayonet and grenade.

Captain Groves.

301-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Command and leadership; machine guns, direct fire and indirect fire; the 37 mm. gun; light mortar; military law and rules of land warfare. Field engineering, including principles and methods of construction of all types of trenches, obstacles, concealment and camouflage.

Lieutenant Hart.

401-2. Sem. 1 and 2.

Rec. 2. Lab. 3.

Tactics, to include organization, armament, equipment and conduct of the section, platoon, rifle company, machine gun and howitzer companies in offensive and defensive combat. Conduct of covering detachments, demonstrations, exercises and problems on sand table, map and terrain; military history; company administration; command and leadership, and pistol practice.

Captain Groves.

ENGINEER UNIT

101. Sem. 1

Rec. 1. Lab. 2.

School of soldier, squad, platoon and company; care, operation and use of small arms; ceremonies.

Lieutenant Beers.

102. Sem. 2.

Rec. 1. Lab. 2.

Gallery and range practice; calisthenics; mass games, athletics; voice drill; military courtesy; customs of the service; efficiency, discipline and morale; security on march and in camp including guard duty.

Lieutenant Beers.

201-2. Sem. 1 and 2.

Rec. 1. Lab. 2.

Principles of military organization, army in peace and war, organization of tactical and administrative units, fundamentals of army administration, military correspondence, company records, returns relating to personnel; fortifications including permanent, semipermanent and temporary works, coast defenses, the navy, organization of ground, siting trenches, trench layouts and profiles, shelters, emplacements,

obstacles, tank mining, miscellaneous accessory works, camouflage, demolitions, explosives, mine warfare; reconnaissance for tactical and engineering purposes, field messages, operation orders and reports. *Lieutenant Beers.*

301. Sem. 1.

Rec. 2. Lab. 3.

Supply methods in garrison and field, general functions of various supply departments, property responsibility, mess management, records and returns pertaining to supply; basic principles and requirements of military maps, map coordinates, the grid system, map reading, exercises in visibility and contouring, military sketching, aerial mapping, photography, map reproduction. *Captain Ingalls.*

302. Sem. 2.

Rec. 2. Lab. 3.

Military bridges of fixed and floating types, expedients for crossing streams, cordage and rigging including knots, lashing and splices; military roads including location, type, construction, maintenance, quick methods and expedients; military railroads both standard and narrow gauge; map maneuvers and terrain exercises involving engineering operations. *Captain Ingalls.*

401. Sem. 1.

Rec. 2. Lab. 3.

Personal hygiene, prevention of infection, first aid, camp sanitation, water supply, disposal of wastes. Construction in war, plans and layouts of camps and cantonments, barracks and quarters, wharves, docks, railway terminals, mass concrete, foundations, gun blocks. *Captain Ingalls.*

402. Sem. 2.

Rec. 2. Lab. 3.

Gasoline engine, electrical equipment, motor trucks, tractors, trailers, convoys and road discipline, combat tanks and armored cars. The Corps of Engineers. Military law including principles, sources, authority, articles of war, riot duty, court martial, martial law, military government and rules of land warfare. Critical study of the military policy of the United States. Characteristic tactics of various arms. *Captain Ingalls, Captain Compton.*

MODERN LANGUAGES

Professor Atkinson

Assistant Professor Moore

Assistant Mrs. Fortier

FRENCH

No college credit is given for high school work in modern languages. Those who have completed two years of high school work in any language will take courses 201-2 in that language.

101-2. French.—Sem. 1 and 2.

Rec. 3.

This course is for those students who have had not more than one year of French in preparatory schools and for those who have never studied the language. It will consist of the acquisition of a good pronunciation, essentials of grammar, facility in understanding and speaking simple idiomatic sentences, and simple prose composition.

Professor Atkinson and Assistant Mrs. Fortier.

201-2. French.—Sem. 1 and 2.

Rec. 3.

This course is designed for those who have successfully completed two years of preparatory school work in French, or have finished course 101-2. It will consist of a thorough review of French grammar, and reading from well selected texts of modern authors. Oral work will be continued.

Professor Atkinson and Assistant Mrs. Fortier.

301-2. French.—Sem. 1 and 2.

This course will consist of reading in class from representative authors, collateral reading in scientific and other periodicals, written reports on outside reading, conversation and continuous review of grammar.

The offering of this course will depend on the time at the disposal of the instructors of the department. In no case will it be offered for fewer than five, who can continue in it throughout the year.

Prerequisite: 201-2.

Professor Atkinson and Assistant Mrs. Fortier.

ITALIAN

If there is sufficient demand for Italian, a course will be given corresponding to French 101-2.

SPANISH**101-2. Spanish.**—Sem. 1 and 2.

Rec. 3.

This course is for students who have not had more than one year of Spanish in preparatory school, and for those who have never studied the language. It will consist of the acquisition of a good pronunciation, grammar (including the forms and some of the uses of the subjunctive), facility in understanding and speaking simple idiomatic sentences, and prose composition.

Professor Atkinson, Assistant Professor Moore.

201-2. Spanish.—Sem. 1 and 2.

Rec. 3.

This course is designed for those who have successfully completed two years of preparatory work in Spanish, or who have finished course 101-2. It will consist of a thorough review of Spanish grammar, and reading from well selected texts of modern authors. Oral work will be continued.

Professor Atkinson and Assistant Professor Moore.

GERMAN**101-2. German.**—Sem. 1 and 2.

Rec. 3.

This course is for those students who have not had more than one year of German in preparatory school, and for those who have never studied the language. It will consist of the acquisition of a good pronunciation, essentials of grammar, facility of understanding and speaking simple, idiomatic sentences, and simple prose composition.

Assistant Professor Moore.

201-2. German.—Sem. 1 and 2.

Rec. 3.

This course is designed for those who have successfully completed two years of preparatory work in German, or who have finished course 101-2. It will consist of a thorough review of German grammar, and reading from well selected texts of modern authors.

Assistant Professor Moore.

MUSIC

*Professor Thomas
Instructor Bidez*

201-2. College Band.—Sem. 1 and 2.

Rec. 0. Lab. 4.

Competent players of band instruments are transferred to the college band upon satisfactory completion of a try-out as given by the bandmaster. In the second semester, a second band is organized for first year students who wish to learn band instruments. Instruction free. Instruments furnished by the college.

Instructor Bidez.

303-4. College Orchestra.—Sem. 1 and 2.

Rec. 0. Lab. 4-6.

The college orchestra affords to qualified students an excellent opportunity for study of orchestral compositions. A second orchestra is maintained to prepare musicians for the future first orchestra. A number of selected musicians receive remuneration for regular college work.

Instructor Bidez.

401-2. College Glee Club.—Sem. 1 and 2.

Rec. 0. Lab. 4-6.

The glee club provides the opportunity for those qualified to study and learn the popular and more serious forms of choral compositions. Students are admitted through a try-out given by the director. Regular attendance is required of all who are selected to make trips with the club.

Instructor Bidez.

305.—Theory of Music.—Sem. 1.

Rec. 1. Lab. 4.

A study of the rudiments of music; notation, value of notes and rests; intervals, inverted and en-harmonic; forms of the diatonic scale; major and minor scales, chords; tempo, time and rhythm; syncopation, abbreviations, and embellishments.

Instructor Bidez.

306. Musical Performance.—Sem. 2.

Rec. 1. Lab. 4-6.

Composition, motif, structure, phrase, theme; imitation, fuge, canon, counterpoint; expression, arrangement of the score; instrumentation, accompaniment; acoustics.

Instructor Bidez.

407. History of Music.—Sem. 1.

Rec. 1. Lab. 4.

The progress of musical development from the primitive period to the present. The development of instruments, their compass and pitch. Development of part-songs; modern voice placing, compass, and color.

Instructor Bidez.

408. Music Appreciation.—Sem. 2.

Rec. 1. Lab. 4-6.

Musical compositions, overture, symphony, sonata, concerto, fantasia, opera, ballad, aria, recitative, cantata, oratorio. The influence of art upon music, and of music upon other fine arts.

Professor Thomas.

PHYSICS

Professor Wooten
Assistants Bailey and Stough

201. General Physics.—Sem. 1. Rec. 3. Lab. 0.

Mechanics and heat. Lectures and demonstration, weekly problem work. For students in engineering. Prerequisite: Mathematics 102 or 103. *Professor Wooten.*

202. General Physics.—Sem. 2. Rec. 3.

Sound, light and electricity. Lectures and demonstration, weekly problem work. For students in engineering. Prerequisite: Physics 201. *Professor Wooten.*

203. General Physics.—Sem 1. Rec. 3.

Mechanics and heat. Lectures and demonstration, weekly problem work. For non-engineering students. Prerequisite: Mathematics 102. *Professor Wooten.*

204. General Physics.—Sem. 2. Rec. 3.

Sound, light and electricity. Lectures and demonstration, weekly problem work. For non-engineering students. Prerequisite: Physics 203. *Professor Wooten.*

205. Agricultural Physics.—Sem. 1.

Elementary mechanics, heat and electricity. Lectures and demonstration work, weekly problem work. For students in agriculture. *Professor Wooten.*

206. Physics for Home Economics Students.—Sem. 2. Rec. 3.

Mechanics and applications of machines, devices used in the home, also exposition of principles of heat, light and electricity underlying same. *Professor Wooten.*

207. Physical Laboratory.—Sem. 1. Lab. 3.

Experiments in subjects treated in physics 202. Prerequisite: Mathematics 102 or 103.

Professor Wooten and Assistant.

208. Physical Laboratory.—Sem. 2. Lab. 3.

Experiments in subjects treated in course 203. Prerequisite: Physics 207 *Professor Wooten and Assistant.*

301. Advanced Electrical Measurements.—Sem. 1. Lab. 3.

Precision work in voltage, current and power measurement. Potentiometer, galvanometer, resistance and inductance work. Alternating current bridge measurements. Required of all students in electrical and mechanical engineering. Prerequisite: Physics 208. *Professor Wooten and Assistant.*

302. Advanced Electrical Measurements.—Sem. 2. Lab. 3

Continuation of work treated in 301. Weekly experimental work on above lines and lecture and problem work in the theory of precision measurements, also laws of probability and least squares in their application to errors. Prerequisite: Physics 301. *Professor Wooten and Assistant.*

401. Advanced Electricity and Magnetism.—Sem. 1. Lab. 2.
Prerequisites: Mathematics 202 or 301 and Physics 202 and 206.
Professor Wooten and Assistant.

402. Advanced Electricity and Magnetism.—Sem. 2. Rec. 2.
Prerequisites: Physics 401. *Professor Wooten.*

403. Analytical Mechanics.—Sem. 1. Lec. 2.
Vector analysis and mathematical induction. Work in such subjects as statics, dynamics, etc. Weekly lectures and problem work. Course is offered as optional to all students who have completed Physics 202 or 204.
Professor Wooten.

404. Analytical Mechanics.—Sem. 2. Lec. 2.
General principles and generalized co-ordinates. History of mechanics and the development of the treatments of the problems of a material universe. Prerequisite: Physics 403.
Professor Wooten.

PHYSICAL TRAINING AND ATHLETICS

Professor Donahue

Professor Hutsell

The Alumni Gymnasium offers improved facilities for complete physical training in outdoor and indoor work. The college authorities attach due importance to the value of robust physical health. The aim of the athletic authorities is to develop, not only a set of highly trained athletic experts in particular fields of sports, but to interest each individual student in the care and development of the body through some form of athletic activity. While, therefore, every effort is made to maintain a high standard of athletic efficiency in various representative teams, every member of the student body is encouraged to gratify his love for games and sports.

The football field, named in honor of the surgeon, Dr. J. H. Drake, is situated on the experiment station grounds near the gymnasium. The old field on the campus has been graded and put in such a condition that the baseball and track teams will have facilities second to none in the South.

A physical examination of each man entering the freshman class will be made by the college physician and assistants at time of enrollment.

The following courses are offered:

101-2. Physical Training.—Sem. 1 and 2. Lab. 2.

Floor tactics, calisthenics, gymnastics, swimming, outdoor and indoor games and athletics. Personal hygiene. Required of all first year men students.
Professor Hutsell.

201-2. Theory and Practice of Gymnastic Teaching.

Sem. 1 and 2. Rec. 1. Lab. 2.

Actual class leadership in all work taken up during the freshman year. For sophomores.

Professor Hutsell.

301-2. Practical Instruction in Athletic Sports.—Sem. 1 and 2.
Rec. 3.

Lectures on plays and formations in all major and minor sports, as well as detailed instruction in track and field games, swimming, etc. For juniors only.

Professors Donahue and Hutsell.

401-2. Theory and Practice of Coaching.—Sem. 1 and 2.

The theory of coaching football, basketball, baseball, track and field, will be taken up in connection with demonstrations. Training methods, rules, officials, diets, massage, public hygiene and business management. Prerequisite: 301-2. For seniors only.

Professors Donahue and Hutsell.

DEPARTMENT OF HOME ECONOMICS

HOME ECONOMICS

Miss Green

101. Clothing I.—Sem. 1. Rec. 1. Lab. 6.

This course is based upon the clothing problem of the college girl and a budget is planned.

Fundamental stitches, selection of material and garment construction are taught by planning and making underwear and simple wash dresses.

Prerequisite: One year of high school clothing.

Parallel: Freehand Drawing, Arch. 121 and Water Color, 124.

102. Foods I.—Sem 2. Rec. 1. Lab. 6.

This course is planned on the meal basis. The principles of cookery are taught in laboratory and applications are made and further skill developed in preparation and service of meals.

Prerequisites: One year of high school foods, Chemistry 101, Zoology 101, etc.

Parallel: Chemistry 101, Botany 102.

201. Clothing II.—Sem. 1. Rec. 1. Lab. 6.

Continuation of Clothing 1.

The choice, care and cost of clothing is the basis of this course. Advanced problems in garment construction, drafting of patterns and the use of commercial patterns are worked out.

Prerequisites: Freehand Drawing, Arch. 122, Water Color 124.

202. Foods II.—Sem. 2. Rec. 1. Lab. 6.

Continuation of Foods 1.

Principles of canning, preserving and jelly-making are taught in this course.

Prerequisites: Chemistry 101-2, Chemistry 301, Zoology 101, Botany 102.

Parallel: Bacteriology, Vet. 233; Physiological and Food Chemistry, 204, 212; Physics, 206; Physiology, Vet. 101.

204. Costume Design.—Sem. 1. Rec. 0. Lab. 6.

The basis of this course is the history of costume. The proportions of the human figure and the application of the principles of design to the selection and making of costumes are studied.

Prerequisites: Home Economics 101-201.

301. Dietetics.—Sem. 1. Rec. 1. Lab. 6.

The purpose of this course is to study food requirements of individuals and families under varying and physiological, economic and social conditions.

Prerequisites: Home Economics 201-202.

302. Nutrition.—Sem. 2. Rec. 1. Lab. 6.

The fundamental principles of nutrition are studied and applied to the food problems of the child, the family and the community in relation to health.

Prerequisites: Home Economics 201-202-302.

303. Health and Sanitation.—Sem. 1. Rec. 2.

The basis of this course is the control of conditions and environment in relation to health. Health laws in regard to water and food supply and disposal of household waste are studied.

305. House Planning and Construction.—Sem. 1. Rec. 3.

The purpose of this course is to present the problems of the house as to location, design and construction and such phases of heating, lighting, plumbing and ventilation as affect the standards of good housing.

Prerequisites: Physics 206, Freehand Drawing 121.

306. House Furnishing and Decoration.—Sem. 1. Rec. 1. Lab. 3.

The basis of this course is the principles of color and design applied to the artistic and economic problems of furnishing and decoration.

Prerequisites: Home Economics 305, Water Color, Arch. 124.

401-2. Home Economics Education.—Sem. 1 and 2. Rec. 2.

The purpose of this course is to give practice in lesson planning, teaching and methods of presentation of subject matter in home economics.

Prerequisites: Education 401, Home Economics 201-202, Home Economics 301-302-303.

403. Child Welfare.—Sem. 1. Rec. 2.

The basis of this course is a study of child psychology which shall enable the student to better interpret and direct the physical, mental and moral development of children.

Prerequisite: Psychology.

405-6. Home Administration.—Sem. 1 and 2. Rec. 3.

The purpose of this course is to study the evolution of the home and its present economic, social and moral significance.

The problems of organization, finance, management and standards of living in relation to women as consumers in the

home will be given special study. The problems will be studied in the practice house, where groups of the class live during the year.

Prerequisites: Home Economics 201-202, 301-302, 303-305-306; Economics 401.

HOME DEMONSTRATION WORK

Home Demonstration Work is carried on in all of the states as a department of the Extension Service of the Colleges of Agriculture, co-operating with the United States Department of Agriculture.

This is a permanent and fixed part of the educational system of the several states, and there is a very great demand for well trained women to fill the many positions of leadership.

When the organization is completed, there will be a trained woman leader in each of the 3,000 or more counties in the United States and, in addition to this, a large force of technical specialists, district and state supervisors. At present the work is in its infancy.

Women, desiring to enter a profession where good salaries will be paid, and in which there are unlimited possibilities for service, should register for the course in Home Demonstration Work.

202. Home Laundering.—Sem. 2. Rec. 1. Lab. 1.

This includes stain removal, setting colors, washing cottons, linens, woolens, silk; ironing; dry-cleaning; dyeing; types of washing machines; plans for well equipped home laundries. Prerequisite: Chemistry 101-2, 103-4, Home Economics 101.

301-2. Food Preservation.—Sem. 1 and 2. Rec. 1. Lab. 2.

Fruits, vegetables, meats; canning, curing, drying, brining, pickling, vinegar-making, jelly-making, fruit juice making, preserving, fancy packing. Prerequisite: Chemistry 101-2, 201, Bacteriology, Home Economics 102.

303. Poultry Club Practice.—Sem.. Rec. 0. Lab. 2.

This course gives the student practice in culling, feeding for egg production, packing and grading eggs, organization of egg circles, marketing, keeping records, preparation for poultry shows and fairs; poultry judging, and other phases of poultry club work.

306. Organization.—Sem. 2. Rec. 1. Lab. 0.

Origin, development, and results of home demonstration work in the South, with special reference to the work in Alabama. Girls' and women's home demonstration clubs; individual demonstrations, community organizations; exhibits, fairs. Prerequisite: Home Demonstration 301-2.

307. Demonstration Methods.—Sem. 1. Rec. 1. Lab. 2.

In this course students will be trained to give demonstrations in cookery, food preservation, garment-making, butter-making, laundering, and other subjects.

Prerequisite: Freshman, sophomore, home economics; dairying. Parallel: Poultry and junior home economics; Home Demonstration 301-2, 303, 305.

402. Field Work.—Sem. 2.

Rec. 1. Lab. 2.

In this course students will organize girls' and women's home demonstration clubs in Lee County, and give public lectures and demonstrations.

Prerequisite: Home Demonstration 202, 301-2, 303, 305, 307.

403-4. Administration.—Sem. 2.

Rec. 2. Lab. 0.

In this course the student will become familiar with the organization of the Extension Service, and its relation to all forces working for the improvement of rural conditions.

Students will be required to work two hours a week in the extension offices in order that they may become familiar with the office duties of a home demonstration agent.

Prerequisite: Home Demonstration 305, 402.

COLLEGE OF AGRICULTURE

AGRONOMY

Professor Funchess
Assistant Professor Burleson
Assistant Professor Parker
Instructor Tidmore

101. Corn Production.—Sem. 1. Rec. 1. Lab. 2.

A study of the fundamental factors involved in corn production.

Professor Funchess and Assistant Professor Burleson.

202. Small Grains and Weeds.—Sem. 2. Rec. 2. Lab. 2.

The first half semester is devoted to the small grains, the second half, to common weeds.

Assistant Professor Burleson.

302. Forage Crops.—Sem. 2. Rec. 2. Lab. 2.

This course deals with both grass and legume forage crops. The crops are considered from the standpoint of (a) pasture crops; (b) hay crops; and (c) soil improving crops.

Professor Funchess and Assistant Professor Burleson.

304. Soils.—Sem. 2. Rec. 2. Lab. 2.

Origin and classification of soils; soil areas and types; soil physics.

Professor Funchess and Assistant Professor Burleson.

401. Fertilizers and Soil Fertility.—Sem. 1. Rec. 2. Lab. 3.

Fertilizers as related to crop production and to permanent soil fertility. Fundamental principles of soil fertility. A part of the laboratory work may be done in connection with soils from the home farm.

Prerequisite: Course 304 and quantitative chemistry.

Professor Funchess and Assistant Professor Burleson.

402. Special Soil Problems.—Sem. 2. Rec. 1. Lab. 2.

This course is planned to serve those students who desire additional work in soil fertility. Lectures, assigned readings, conferences and laboratory work.

Prerequisite: Course 401.

Professor Funchess.

403. Fiber and Sirup Crops.—Sem. 1. Rec. 2. Lab. 2.

In this course, most of the time will be devoted to cotton. A limited amount of time will be devoted to other fiber crops, and to sirup crops.

Assistant Professor Burleson.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Instructor Tidmore.

AGRICULTURAL ENGINEERING

Professor Nichols
Assistant Professor Randolph
Instructor Easter

Courses offered in agricultural engineering attempt to present to the student (1) The fundamental principles underlying the construction of farm machinery, structures and devices in as simple and clear manner as possible; (2) A knowledge of the equipment on the market, or plans which are available from which he must select; (3) How he can use these devices to increase the efficiency of his farming. The following courses are open to four-year students only.

301. Drainage and Terracing.—Sem. 1. Rec. 2. Lab. 3.

The fundamental principles of terracing and drainage with practical applications.
Professor Nichols.

302. Farm Machinery.—Sem. 2. Rec. 2. Lab. 3.

A study of the types of field machinery and their use with especial attention to their adaptability to Alabama agriculture.
Professor Nichols.

401. Farm Motors.—Sem. 1. Rec. 2. Lab. 3.

A study of internal combustion engines, their principles and uses, with especial attention to tractors.
Assistant Professor Randolph.

402. Farm Buildings.—Sem. 2. Rec. 2. Lab. 3.

A study of modern construction with attention to sanitation, heating, lighting, ventilation, farm lighting systems, plumbing, and concrete construction on the farm.
Professor Nichols.

403. Domestic Engineering.—Sem. 1. Rec. 2. Lab. 3.

A study of water supply, pump and pumping systems, plumbing, sewage disposal, lighting, heating and ventilation in the farm home. Students in Domestic Science only.
Instructor Easter.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Professor Nichols, Assistant Professor Randolph and Instructor Easter.

ANIMAL HUSBANDRY

Professor Grimes
Associate Professor Eaton
Assistant Professor Burns
Instructor Lauderdale

101. Breeds of Live Stock.—Judging.—Sem. 1. Rec. 1. Lab. 2.

A study is made of the origin, history, and characteristics of the more important breeds of beef cattle, light horses, heavy horses, jacks, and mules. Judging consists of scoring and placing animals of the different breeds according to breed standards.

Assistant Professor Burns.

102. Breeds of Live Stock.—Judging.—Sem. 2. Rec. 1. Lab. 2.

A study is made of the origin, history, and characteristics of the more important breeds of dairy cattle, sheep, and swine. Judging consists of scoring and placing animals of the different breeds according to breed standards.

Assistant Professor Burns.

201. Elements of Dairying.—Sem. 1. Rec. 1. Lab. 2.

The course consists of a discussion of the fundamental principles of dairying. Lectures on the secretion and composition of milk; the testing of milk and cream for butterfat; the care of milk and cream; construction, operation, and care of cream separators. Laboratory work consists of operation of farm churn, Babcock test, and cream separators.

Associate Professor Eaton.

202. Live Stock Judging.—Sem. 1. Rec. 0. Lab. 4.

Special attention is given to comparative and group judging of the more important breeds of cattle, dairy cattle, sheep, swine, horses, and mules. Students are trained in the oral presentation of reasons with reference to the relative merit of animals.

Prerequisite: A. H. 101-2.

Professor Grimes.

301. Animal Nutrition.—Sem. 1. Rec. 3. Lab. 0.

A consideration of the classes of food nutrients, the ordinary and possible function of each in the animal body; digestion, absorption, and assimilation; the extent and nature of the demands for maintenance, growth, fattening, milk, and wool; principles in selection of rations; feedstuffs; feeding standards and compounding rations.

Assistant Professor Burns.

302. Milk Production.—Sem. 2. Rec. 1. Lab. 2.

The course consists of a study of feeding, care and management of the dairy herd under Southern conditions; equipment for the dairy farm, development of the dairy herd, dairy farm records and the conduct of official tests.

Prerequisite: A. H. 201.

Associate Professor Eaton.

303. Poultry—Sem. 1.

Rec. 2. Lab. 0.

In this course lectures are given covering the different types of poultry with relation to their use and value on the farm. Instruction is also given in feeding, managing, housing, and judging poultry.

Associate Professor Eaton.

304. Horse and Mule Management.—Sheep Production—Sem. 2.

Rec. 1. Lab. 2.

(a) *Horse and Mule Management*: (Half semester).

Lecture and laboratory work are given in the care of stallions, mares, and foals; work horses and mules at labor and idle.

(b) *Sheep Production*: (Half semester.)

Instruction is given in the handling of pure bred and grade flocks, considering the market classes and grades, housing and handling under southern conditions.

Prerequisite: A. H. 301 and Vet. 102.

Assistant Professor Burns.

401. Beef Cattle Production—Sem. 1.

Rec. 2. Lab. 2.

The raising of beef cattle is discussed in detail, featuring the care and management of the beef herd in production and marketing. Practical work is given in preparing animals for shows and sale.

Prerequisite: A. H. 301 and Vet. 301-2.

Professor Grimes and Assistant Professor Burns.

402. Swine Production—Sem. 2.

Rec. 2. Lab. 2.

A detailed study of the practical methods and principles involved in the care and management of hogs. A study of the equipment and methods on the best hog farms will be brought out in the lecture work. The laboratory work consists of demonstrations and exercises in the growing and handling of hogs under Alabama conditions.

Prerequisite: A. H. 301 and Vet. 301-2.

Professor Grimes and Assistant Professor Burns.

403-4. Dairy Manufacturing—Sem. 1 and 2. Rec. 1. Lab. 3.

The course consists of practical laboratory work in the manufacture of creamery butter, ice cream, and cottage cheese. The object of this course is essentially the training of creamery operators.

Prerequisites: A. H. 201 and Bacteriology.

Associate Professor Eaton.

406. Animal Breeding and Herd Book Studies—Sem. 2.

Rec. 2. Lab. 0.

This course includes a study of inbreeding, line breeding, outcrossing, selection, and other problems which confront the live stock breeder. Training is given in registering animals, tabulating pedigrees, and use of herd book.

Prerequisite: Genetics.

Professor Grimes.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Instructor Lauderdale.

BOTANY*Professor Gardner**Associate Professor Johnstone**Associate Professor Povah**Laboratory Assistants Hollingsworth, Stewart and Shaver*

The electives offered in botany are intended to meet the needs of three different groups of students, namely, (1) Those who intend to engage in farming or in farm demonstration work; (2) Those who plan to teach in secondary schools; (3) Those who desire a thorough technical training in botany to fit themselves for plant disease inspection, investigational work in experiment stations, the United States Department of Agriculture, or similar positions, or who desire to obtain college teaching positions.

The electives that will meet these different needs are as follows:

FOR GROUP (1) APPLIED BOTANY

Systematic Botany.

Diseases of Plants, and Plant Physiology.

FOR GROUP (2) TEACHING BOTANY

Plant Physiology, Diseases of Plants.

Systematic Botany, Methods in Botany, and Ecology.

FOR GROUP (3) TECHNICAL BOTANY

The advanced courses in Plant Physiology and Plant Pathology and a thesis on a suitable subject in addition to the courses recommended for teachers.

201. General Botany.—Sem. 1.

Rec. 2. Lab. 3.

Precedes all other courses in botany. This course is designed to furnish a broad general introduction to the fundamental principles of botany, supplying the foundation upon which subsequent courses are built, and at the same time giving to the non-specialist a good acquaintance with those botanical principles which should form a part of his equipment for life.

*Associate Professor Johnstone.***202. Agricultural Botany.—Sem. 2.**

Rec. 2. Lab. 3.

This course is designed to meet the needs of agricultural students. The evolutionary development and economic importance of the lower groups of plants are treated briefly. Special emphasis is placed on the classification and identification of common flowering plants, the characteristics of obnoxious weeds, and the botanical features of crop plants. The student will be trained not only in the use of the manual for the identification of plants, but also in the ability to recognize species and families at sight.

Prerequisite: Bot. 201.

Associate Professor Johnstone.

204. Pharmaceutical Botany.—Sem. 2. Rec. 2. Lab. 3.

It is the aim of this course to acquaint the student with the local medicinal plants, their recognition and classification. Special attention will be given to the characteristics of medicinal plants, the parts used, the drugs obtained, and the characteristics of the families containing these species.

Prerequisite: Bot. 201.

Associate Professor Johnstone.

206. Veterinary Botany.—Sem. 2. Rec. 2. Lab. 3.

This course is to train students in the classification and recognition of poisonous and medicinal plants. The students will be taught to recognize these plants in the field as well as in the laboratory. Special attention will be given to the families represented by important poisonous and medicinal plants.

Prerequisite: Bot. 201.

Associate Professor Johnstone.

306. Plant Physiology.—Sem. 2. Rec. 2. Lab. 3.

A study of the various phases of the metabolism of plants such as utilization of raw materials, the manufacture, digestion and assimilation of carbohydrates, fats and proteins, respiration and excretion of waste products.

Prerequisites: Bot. 201 and 202.

Professor Gardner.

307. Systematic Botany.—Sem. 1. Rec. 1. Lab. 3.

This is an advanced course dealing with medicinal plants, poisonous plants, weeds, and other wild plants. The laboratory and field work will be to a considerable extent adapted to the needs of the student.

Associate Professor Johnstone.

401. Plant Physiology.—Sem. 1. Rec. 1. Lab. 3.

This course deals with such phases of plant physiology as the water requirements, absorption, rise of sap, growth, movement, germination, pollination, and reproduction of plants.

Prerequisites: Bot. 201 and 202.

Professor Gardner.

409. Diseases of Plants.—Sem. 1. Rec. 2. Lab. 3.

A practical course dealing with the important diseases of fruits, nuts, truck crops, field and forage crops. Special attention will be given to symptoms, diagnosis, and control methods. A collection of economic diseases is required.

Prerequisites: Bot. 201 and 202.

Associate Professor Povah.

410. Plant Pathology and Mycology.—Sem. 2. Rec. 2. Lab. 3.

A systematic study of plant diseases, dealing with the diagnosis of diseased material, the life history and classification of the casual organism, and pathological methods.

Prerequisites: Bot. 201 and 202.

Associate Professor Povah.

411. Methods in Plant Histology.—Sem. 1. Rec. 1. Lab. 3.

Principles and methods of preparing microscopic slides and other materials for use in teaching and research in botany.

Prerequisites: Botany 201 and 202.

Associate Professor Johnstone.

414. Ecology.—Sem. 2. Rec. 1. Lab. 3.

A course in field botany dealing with the distribution and association of plants in relation to their environment. Students will be expected to take field trips at the discretion of the instructor.

Prerequisites: Bot. 201 and 202.

Professor Gardner.

425. Research in Botany.

After a month spent in reading under the direction of the professor the student will carry out a series of experiments on some problem in morphology, physiology or plant pathology. In addition to original experiments, the student will review the literature dealing with his chosen topic, and make a complete and satisfactory report. It is hoped that the results of this work will be worthy of publication. Hours to be arranged.

HORTICULTURE

Professor Starcher

Associate Professor Isbell

Assistant Professor Brown

Instructors Kimbrough and Cook

102. Plant Propagation.—Sem. 2. Rec. 1. Lab. 2.

A study of the propagation and growth of plants.

Instructor Kimbrough.

201-2. Orchard Management.—Sem. 1. Rec. 1. Lab. 2.

Sem. 2. Rec. 2. Lab. 2.

A practical course in planting, pruning, cultivating, fertilizing, spraying, thinning, harvesting, grading, storing and marketing of the most valuable fruits and nuts grown in the South.

Plant Propagation is prerequisite.

Associate Professor Isbell and Instructor Kimbrough

301. Landscape Gardening.—Sem. 1. Rec. 2. Lab. 0.

Practical landscape gardening as applied to the South.

Instructor Cook.

302. Vegetable Gardening.—Sem. 2. Rec. 2. Lab. 2.

A study of the origin, growing, storing, use and varieties of different vegetables.

Instructor Kimbrough.

401-2. Fruit Growing.—Sem. 1 and 2. Rec. 3. Lab. 2.

An advanced course along the lines of work given in sophomore and junior classes. Orchard Management and Vegetable Gardening are prerequisites to this course.

Associate Professor Isbell and Instructor Kimbrough.

403. Forestry. Sem. 1. Rec. 2. Lab. 0.

A study of the protection and use of forest and forest products.
Instructor Kimbrough.

405. Floriculture.—Sem. 1. Rec. 1. Lab. 2.

A study and practice of practical floriculture.
Instructor Cook.

406. Plant Breeding.—Sem. 2. Rec. 2. Lab. 0.

A study of the improvement of plants, theories and laws of plant breeding with some practical breeding work.

Instructor Kimbrough.

407-8. Advanced Horticulture.—Sem. 1 and 2. Rec. 2. Lab. 2.

A study of horticultural literature and an analysis of research and extension problems.
Professor Starcher.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.
Assistant Professor Brown.

RURAL ORGANIZATION AND FARM MANAGEMENT

Professor Gray
Professor Duggar

401. General Farm Management and Rural Problems.—Sem. 1. Rec. 1.

A study of the principles involved in the choice of a proper type of farming; comparative merits of intensive and extensive farming; relation of live stock to farm management; size of farms and amount of capital in relation to profits; rental systems; labor in relationship to machinery; layout of fields and buildings. The course is also designed to put students in touch with the fundamental principles underlying the general social organization of country life through studying the student's own community as far as possible.

Professor Gray.

402. Farm Management and Rural Economics.—(Advanced Course.)—Sem. 2. Lab. 6.

A laboratory course for a limited number of senior or graduate students who desire to make intensive preparation for farming or for employment in agricultural institutions through original research on some special problem relating to the economics of production of crops or animals. Wide range is given in the choice of the individual problem for investigation so that each student may make the results attained contribute to his proficiency in the particular line of agriculture in which he desires to engage.

Instruction is given by means of surveys of successful farms or communities; seminars for the report, discussion and co-ordination of such original data; and by collateral reading. The original data, when properly organized and presented, will be eligible as a graduation thesis for either the bachelor's or master's degree.
Professor Duggar.

ZOOLOGY AND ENTOMOLOGY*Professor Hinds**Associate Professor Robinson**Assistant Professor Guyton**Laboratory Assistants Caldwell, Caldwell, Melvin, Spratling***101. Invertebrate Zoology.**—Sem. 1. Rec. 2. Lab. 2.

A study of the structure, habits, development, ecology, and economic importance of protozoan and invertebrate animals.

Associate Professor Robinson and Assistant Professor Guyton.

102. Vertebrate Zoology.—Sem. 2. Rec. 2. Lab. 2.

A detailed study of the various classes of vertebrates as to function, distribution, reproduction, heredity and economic aspects.

Associate Professor Robinson and Assistant Professor Guyton.

202. Comparative Anatomy.—Sem. 2. Rec. 1. Lab. 6.

A course dealing with the comparison of vertebrates as to functions of the different organs.

Prerequisites: 101-2.

Associate Professor Robinson.

301. General Entomology.—Sem. 1. Rec. 2. Lab. 2.

A study to acquaint the students with the general characteristics, and habits of the orders and families in the class of insects.

Prerequisites: 101-2. *Assistant Professor Guyton.*

302. Economic Entomology.—Sem. 2. Rec. 2. Lab. 2.

A consideration of the biological aspects, life histories and control of insects.

Prerequisite: 301. *Assistant Professor Guyton.*

401. Genetics.—Sem. 1. Rec. 2. Lab. 0.

A consideration of the principles involved in heredity.

Prerequisite: 101-2. *Associate Professor Robinson.*

402. Sanitary Entomology.—Sem. 2. Rec. 2. Lab. 2.

A consideration of the biological relationships among insects, the diseases of domestic animals and man, with control measures.

Prerequisite: 301. *Assistant Professor Guyton.*

403. Insect Control.—Sem. 1. Rec. 2. Lab. 2.

A study in the taxonomy, history of economic entomology, legislation regarding insects and insecticides and control measures.

Prerequisite: 302. *Associate Professor Robinson.*

404. Economic Ornithology.—Sem. 2. Rec. 1. Lab. 2.

A consideration of birds, in relation to agriculture, recognition of various species as to flight, color markings, songs and a consideration of their feeding habits.

Prerequisites: 102 and 301.

Associate Professor Robinson.

405. Micro-technique.—Sem. 1. Rec. 0. Lab. 6.

Killing tissues, imbedding, sectioning, staining and mounting microscopic slides. *Assistant Professor Guyton.*

406. Bee Culture.—Sem. 2. Rec. 2. Lab. 2.

A study of the behavior, manipulation, production of bees and honey and a consideration of bee diseases.

Prerequisite: 301. *Associate Professor Robinson.*

501. Insect Morphology.—Sem. 1. Rec. 2. Lab. 3.

The principles involved in insect morphology.

503-4. Research.

A study of problems in the field of zoology or entomology.

The subject studied and the time devoted to the work will be arranged with the head of the department.

Associate Professor Robinson.

SCHOOL OF EDUCATION

Professor Judd

Professors Stivers, Worley, Chesnutt

To encourage the professional training of teachers the Alabama Legislature of 1915 enacted a law providing for the certification of such graduates from the normal schools and colleges of the State as should include in their courses of study certain courses in education. Accordingly the Alabama Polytechnic Institute along with a number of other institutions of the State established a Department of Education. In the beginning twelve semester hours constituted the educational requirement. Gradually this was raised to eighteen semester hours. Any student in the college might take the courses in education and upon graduation receive a license to teach.

The first step in the direction of formulating a definite teacher-training curriculum was the organization of a curriculum in agricultural education under the provision of the Smith-Hughes Act. Graduates from this curriculum received the degree of Bachelor of Science in Agricultural Education. The anticipated effect was noticed: These men did not think of themselves as students in agriculture with a veneer of education; rather they regarded themselves as teachers in the special field of agriculture.

THE NEXT STEP

Besides the students in agricultural education there are more than a hundred men distributed throughout the various divisions of the college who are taking courses in education and are thereby qualifying for the State Teachers' Certificate. With them this work in education is rather incidental. Their subject-matter courses are selected and grouped with no particular reference to the teaching demands in the secondary schools of the State. To do for this group what has already been done for the students in vocational agriculture, the School of Education has organized a degree course in the general field of secondary education.

COUNTRY LIFE SERVICE

Four-fifths of all the people in Alabama live in the country. In the main our cities are in the midst of farming districts and sustain the closest relationships with them. Their life is, therefore, intimately bound up with the life of the country. The vast majority of the secondary teachers are in the country and small towns. Their academic and professional training should be directed with due regard for the life issues of the people whom they serve.

Particularly because of its subject-matter divisions in agriculture, including agricultural engineering and home economics, the Alabama Polytechnic Institute has a distinct responsibility in the training of secondary teachers for schools outside the larger city centers. In the field of vocational agriculture this responsibility has already been recognized. Beginning with the ensuing year a degree course, wider in scope than that in vocational agriculture but emphasizing the

country-life point of view, will be offered. There will be much elasticity in the choice of subject matter; but a minimum of twenty-four semester hours in agriculture, including courses in agricultural engineering (which shall be understood to embrace farm mechanics) or in home economics will be required of all candidates for the degree of Bachelor of Science in Education.

REQUIREMENTS FOR DEGREE

One hundred and sixty semester hours will be required for the degree of Bachelor of Science in Education. Of this number at least twenty-four hours must be taken from the department of education and twenty-four from the department of agriculture or home economics. By the beginning of the junior year students must determine the subjects which they propose to teach. All subsequent elections in subject-matter courses will be made, subject to the approval of the Dean of the School of Education, with the view of acquiring thorough scholarship in these fields. The practice teaching in the senior year will be done within these chosen subjects.

STATE TEACHER'S CERTIFICATE

Graduates from the School of Education and other graduates from the college who have had the required courses in education will be entitled to receive, upon recommendation of the Dean of the School of Education and upon the payment of a fee of two dollars, the Secondary Professional Teachers' Certificate, good for a period of six years and renewable.

DEMAND FOR TEACHERS

The demand upon the college for teachers is far greater than it can supply. Salaries for beginning teachers range from one thousand to two thousand dollars. The most frequent demand is for teachers of vocational agriculture and for various combinations of the subjects of athletics, manual training, the sciences, and mathematics.

COURSES OF INSTRUCTION

201a. Psychology.—Sem. 1. Rec. 3.

The aim of this course is to introduce the student to the subject matter and methods of general psychology. Prerequisite to educational psychology for all students in *general secondary education*.
Professor Judd.

201b. Psychology.—Sem. 1. Rec. 3.

A special course in elementary psychology. Prerequisite to educational psychology and to the later professional courses in *agricultural education*.
Professor Judd.

202a. Educational Psychology.—Sem. 2. Rec. 3.

This course will present first the general problems and scope of educational psychology. It will then consider: the native equipment of human beings; the psychology of learning in general and as applied to school subjects. Prerequisite to the professional courses in *general secondary education*.
Professor Judd.

202b. Educational Psychology.—Sem. 2. Rec. 3.

In its general aspects this course will be the same as 202a but the special application of the laws of learning will be made, as far as practicable, to the teaching of agricultural subject matter. Prerequisite to the professional courses in *agricultural education*.
Professor Judd.

301. History of Education.—Sem. 1. Rec. 2.

After reviewing the European background this course will trace the development of public education in the United States from the colonial period to the present time. Required of juniors in *general secondary education*. Elective for students in *agricultural education*.
Professor Judd.

302. Supervised Study.—Sem. 2. Rec. 2.

The conception of and demand for supervised study; proper conditions and methods of studying; organization of supervised study; special methods of supervising the study of various subjects. Required of juniors in *general secondary education*. Elective for students in *agricultural education*.
Professor Judd.

303. Introduction to Agricultural Education.—Sem. 1. Rec. 3.

A study of the development of agricultural education in this country under the influence of private and local initiative and under the provisions of State and Federal legislation. It will include a preliminary survey of agricultural education in foreign countries. Required of juniors in *agricultural education*. Elective for students in *general secondary education*.
Professor Stivers.

304. Rural Community Problems.—Sem. 2. Rec. 3.

A study of the more important social and economic problems confronting the rural community. Social topics receiving emphasis will be the rural school, the rural church, farmers' clubs, the farm bureau, part-time schools of agriculture, the community fair, extension service, recreation and health. Among the rural economic problems discussed will be farm credits, the farm loan bank, farm ownership and tenancy, farm equipment, diversification of crops, choice of crops, cost of farm products, marketing farm products, etc. Required of juniors in *agricultural education*. Elective for students in *general secondary education*.
Professor Chesnutt.

305-6. Vocational Education.—Sem. 1 and 2. Rec. 2.

This course will consider: Industrial and social changes giving rise to the demand for vocational training, the historical development of vocational training in this country with its European background; present conditions and tendencies. Elective for students in *education*.
Professors Stivers and Chesnutt.

401. Principles of Secondary Education.—Sem. 1 Rec. 2.

This course will constitute a consideration of the following topics: The secondary school pupil with reference to physical and mental traits and to individual differences; the character and classification of the secondary school population; the secondary school with reference to its purpose, development, and

relationships; the means and materials of secondary education. Required of all students in *education*. *Professor Judd.*

402. Methods of Teaching in Secondary Schools.—Sem. 2. Rec. 2.

The following topics will be considered: purposes of secondary instruction; classroom management; selection and arrangement of subject matter; types of learning; interest and economy in learning; instruction and individual differences; supervised study; methods in class teaching; practice in teaching and lesson planning; measuring results of teaching; organized observation of teaching. Required of all students in *education*. *Professor Judd.*

404. Observation and Practice Teaching.—Sem. 2. Rec. 3.

Seniors in *general secondary education* will be required to observe class teaching in the Lee County High School, to make lesson plans, and to teach classes in subjects in which they are majoring. *Professor Judd.*

405-6. Practicum in Secondary Education.—Sem. 1 and 2. Rec. 2.

This course is an elective for seniors in *general secondary education*. It will comprise the investigation of specific educational situations and problems. Findings will afford data for graduating theses. *Professor Judd.*

407-8. Methods in Teaching Vocational Agriculture.—Sem. 1 and 2. Rec. 3. Lab. 2.

The purpose of this course is to acquaint the student with the best methods of teaching agriculture from a vocational point of view. The lesson plan, the home project, the project outline, the group project, part-time and evening courses, the use of illustrative material, the cataloguing of bulletins, and other reference material, and the professional improvement of teachers are some of the topics to be discussed. The laboratory period will afford opportunity for the preparation of illustrative material for the development and presentation of type laboratory lessons, and for occasional conferences. Required of seniors in *agricultural education*.

Professors Stivers and Chesnutt.

409-10. Practicum in Agricultural Education.—Sem. 1 and 2. Rec. 2.

Agricultural education offers many problems for the advanced student. A study of secondary courses in agriculture will be made with a view to determining their vocational adaptability. Community surveys as a basis for the organization of vocational courses in agriculture will be treated in detail. Elective for students in *agricultural education*.

Professors Stivers and Chesnutt.

412. Observation and Practice Teaching.—Half Sem. 2. Rec. 6.

Seniors in *agricultural education* will be required to observe class teaching in the Lee County High School, to make lesson plans, to supervise study periods, to conduct laboratory exercises and field trips, and to teach classes in the various subjects offered in the vocational agricultural schools.

Professor Worley.

SCHOOL OF CHEMISTRY AND PHARMACY

CHEMISTRY

Professor Ross

Professors Hare and Miller

Associate Professor Powell

Assistant Professors Martin, Marsh and Basore

Instructors Pollard and Massengale

Assistants Gardner, Trapp and Henderson

Instruction in this department embraces the courses of lectures and systematic laboratory work described in the pages immediately following. The lecture and laboratory work required in each class is set out in detail under the section devoted to that class. Each student on entering the chemical laboratory is furnished with a work table, a set of re-agent bottles and the common re-agents and apparatus required in the course to be pursued.

At the close of the session he will be credited with such articles as may be returned in good order, the value of those which have been injured or destroyed being deducted from his contingent fee.

101-2. General Chemistry.—Sem. 1 and 2. Rec. 3.

Lectures in this course embrace a discussion of the fundamental theories and principles of chemistry in connection with the history, preparation and properties of the chief non-metallic and metallic elements and their compounds, some attention being also given to the more important applications of chemistry to the arts and manufactures. Some important classes of organic compounds are also discussed briefly.

Professors Ross and Hare and Assistant Professor Martin.

103-4. Inorganic Chemistry.—Sem. 1 and 2. Lab. 2.

This course embraces a series of experiments illustrative of important phases of the work covered by courses 101-102. Some introductory work in qualitative analysis is given in the latter part of the course.

Instructor Massengale and Assistants Gardner and Henderson.

105. Inorganic Chemistry.—Sem. 1. Rec. 1. Lab. 4.

A course embracing the preparation of a number of the non-metallic elements and some of the more important inorganic compounds, together with some introductory work in qualitative analysis.

Assistant Professor Martin and Assistants Pollard and Trapp.

106. Qualitative Analysis.—Sem. 2. Rec. 1. Lab. 4.

This course includes a study of the methods of the qualitative separation and detection of the more important bases and acids, the principles and theories underlying these methods, and the practical application of these processes in the laboratory.

Assistant Professor Martin and Assistants Pollard and Trapp.

201. Organic Chemistry.—Sem. 1. Rec. 3. Lab. 0.

For students in agriculture. This course, though somewhat more condensed, is similar to 303-4 with the exception that the latter portion of the course is devoted to a special study of fats, carbohydrates and proteins with reference to their functions in the life processes of plants and animals.

Professor Hare.

202. Agricultural Chemistry.—Sem. 2. Rec. 3. Lab. 0.

Lectures on chemistry in its application to agriculture, the origin, composition and classification of soils, the composition and growth of plants, the sources of plant food and how obtained, the improvement of soils, the manufacture and use of fertilizers, the chemical principles involved in the rotation of crops, and the feeding of live stock.

Professor Hare.

203. Organic Chemistry.—Sem. 1. Rec. 3. Lab. 0.

Similar to 201 and 303, but arranged for students in veterinary medicine and in the pre-medical course.

Professor Miller.

204. Physiological Chemistry.—Sem. 2. Rec. 3. Lab. 0.

A brief course for students who have completed course 203.

Professor Miller.

205-6. Qualitative Analysis.—Sem. 1 and 2. Rec. 1. Lab. 6.

A course in the theory and practice of qualitative analysis much more comprehensive than course 106.

Assistant Professor Martin.

207. Qualitative Analysis.—Sem. 1. Rec. 1. Lab. 6.

A course quite similar to course 106.

Assistant Professor Martin.

208. Quantitative Analysis.—Sem. 2. Rec. 1. Lab. 6.

A course in the theory and practice of quantitative analysis, with special reference to the needs of students in the courses in agriculture.

Associate Professor Powell.

209. Organic Preparations.—Sem. 1. Rec. 1. Lab. 8.

This course accompanies course 203 and embraces the preparation of a number of important aliphatic and aromatic compounds.

Assistant Professor Marsh.

211-12. Organic and Physiological Chemistry.—Sem. 1 and 2.

Rec. 1. Lab. 4.

For students in home economics and home demonstration work.

214. Advanced Inorganic Chemistry.—Sem. 2. Rec. 3.

This course embraces a study of inorganic chemistry with special reference to some of the more important chemical theories.

Professor Ross.

301-2. Industrial Chemistry.—Sem. 1 and 2. Rec. 3. Lab. 0.

Lectures in this course include discussion in detail of the processes and chemical principles involved in the more important applications of chemistry in the arts and industries.

Assistant Professor Basore.

303-4. Organic Chemistry.—Sem. 1 and 2. Rec. 2.

Instruction in this subject embraces lectures and recitations upon the leading facts and principles of the chemistry of the carbon compounds, and includes a study of the methods of preparation of the more important compounds, their properties, and their structural and stereo-chemical relations.

Professor Ross.

306. Engineering Chemistry.—Sem 2. Rec. 2.

Embraces the study of the construction and equipment of the chemical plants devoted to the manufacture of the more important chemical products. Excursions to various chemical and metallurgical plants during the course of the year will aid in familiarizing the student with the practical details of the operation of the leading industries.

Professor Ross.

307. Quantitative Analysis.—Sem. 1. Rec. 1. Lab. 8.

This course embraces work in both gravimetric and volumetric analysis, including the analysis of some of the more important ores and minerals.

Assistant Professor Basore.

308. Organic Preparations and Organic Analysis.—Sem. 2. Rec. 1.

A more comprehensive course than 209, including some work in organic analysis.

Assistant Professor Marsh.

331-2. Mineralogy.—Sem. 1 and 2. Lab. 4.

A thorough study is made of the crystal systems with the aid of a full set of crystal models and natural crystals. A large number of minerals are studied from the standpoint of their physical characteristics, so that many of the most important minerals can be identified by a few simple tests. The composition and identity of a large number of minerals are determined by means of the blowpipe, flame, hardness and other tests.

Assistant Professor Basore.

341. General Geology.—Sem. 1. Rec. 3.

A course covering dynamic geology, structural geology, geomorphology and historical geology in the order named.

Associate Professor Powell.

342. Economic Geology.—Sem. 2. Rec. 2.

Embraces the study of modes of occurrence, distribution, origin and uses of coal, petroleum, limestone, salines, gypsums, fertilizing materials, abrasives, clays, and other important non-metallic minerals and of the more important metallic ores.

Associate Professor Powell.

401. Physical Chemistry.—Sem. 1. Rec. 5.

The course of lectures in this subject embraces a discussion of the important theories and laws of physical chemistry.

Professor Hare.

402. Metallurgy.—Sem. 2. Rec. 5.

Includes lectures upon the more important metals, such as iron and steel, copper, lead, tin, silver, gold, mercury, zinc, etc., together with a discussion of the physical and chemical properties of the metals and their alloys, the ores and their treatment, and the processes by which the metals are obtained from the ores, with chemical reactions involved.

Assistant Professor Martin.

403. Metallurgical Laboratory.—Sem. 1 and 2. Lab. 2.

This course includes a study of the construction and operation of some of the more important machinery and appliances employed in ore-dressing, etc.

Associate Professor Powell.

405. Historical Chemistry.—Sem. 1. Rec. 2.

This course embraces an historical study of the growth and progress of chemistry as a science, especial attention being given to a discussion of the progressive development of the fundamental theories of chemistry.

Professor Ross.

407-8. Food Chemistry.—Sem. 1. Rec. 2.

Sem. 2. Rec. 1.

A course of study in the chemistry of foods and food products, as regards sources, composition, nutritive properties, etc.

Assistant Professor Marsh.

409-10. Quantitative Analysis.—Sem. 1 and 2. Rec. 1. Lab. 12.

Embraces analysis of fertilizers, soils, coals, ores, iron, and steel, sugars and sugar products, foods, feeding stuffs, mineral waters, fluxes, slags, etc. The nature of the work is varied somewhat to meet the needs of the individual student.

Associate Professor Powell.

411-12. Quantitative Analysis.—Sem. 1. Rec. 1. Lab. 6.

Sem. 2. Lab. 3.

This course is quite similar in character and scope to course 307.

Associate Professor Powell.

414. Toxicology and Urinalysis.—Sem. 2. Rec. 1. Lab. 3.

A course for students in pharmacy and veterinary medicine.

Assistant Professor Marsh.

PHARMACY

Professor Blake

Assistant Professor Gentry

The School of Pharmacy is a member in good standing of the American Conference of Pharmaceutical Faculties.

Two degree courses are offered, the three-year course leading to the degree *Pharmaceutical Chemist* and the four-year

course leading to the degree *Bachelor of Science in Pharmacy*. Students who satisfactorily complete the special course will be awarded a certificate.

The practical work in pharmacy includes the manufacture of not less than two hundred pharmaceutical preparations and the compounding of not less than seventy-five prescriptions.

The work in pharmacognosy includes the study of more than 250 drugs, each of which the student is required to recognize by its physical and chemical properties, giving Latin name, common name, original habitat, constituents, medicinal action and dose.

201. Pharmacy.—Sem. 1.

Rec. 1.

Metrology; specific gravity; heat and applications of heat; fundamental operations of Pharmacy; apparatus used in Pharmaceutical processes; Pharmaceutical Arithmetic.

Professor Blake and Assistant Professor Gentry.

202. Pharmacy.—Sem. 2.

Rec. 2. Lab. 6.

Laboratory and lecture work in preparation of official and non-official galenicals, including the following classes of preparations: waters, spirits, liquors, mucilages, pills, elixirs, oleates, tinctures, etc.

Assistant Professor Gentry.

204. Pharmaceutical Chemistry.—Sem. 2.

Rec. 3.

A study of the official and non-official inorganic compounds, official title, chemical formula, reactions, description, identification, dosage, etc.

Assistant Professor Gentry.

301. Pharmacy.—Sem. 1.

Rec. 3. Lab. 9.

Pharmaceutical technique and manufacturing pharmacy; official and non-official galenical and chemical preparations.

Professor Blake.

304. Pharmacognosy.—Sem. 2.

Rec. 4.

Crude drugs, lectures, recitations, and practical work in identification. The student is expected to become familiar with the official Latin name, synonyms, habitat, definition, commercial varieties, and other important factors relating to all U. S. P. and N. F. drugs and many non-official drugs.

Professor Blake.

402. Pharmacy.—Sem. 2.

Rec. 2. Lab. 4.

Dispensing pharmacy and prescription laboratory. The compounding of 75 prescriptions taken from the files of retail pharmacies. Class work to accompany.

Professor Blake.

403. Pharmacognosy.—Sem. 1.

Rec. 5.

The study of crude drugs. This course is a continuation of course 304. Both vegetable and animal drugs are considered.

Professor Blake.

404. United States Pharmacopeia.—Sem. 2.

Rec. 4.

This course is primarily a review intended to prepare the student for the State Board examinations. It covers all crude drugs; organic and inorganic chemicals, and preparations found in the U. S. P. and N. F.

Assistant Professor Gentry.

405. Prescriptions and Incompatibilities.—Sem. 1. Rec. 2.

A study of the prescription; its form, dosage, method of compounding, types of incompatibilities.

Assistant Professor Gentry.

406. Pharmacology.—Sem. 2. Rec. 3.

The pharmaco-dynamics, materia-medica, therapeutics, and toxicology of animal, vegetable, and mineral drugs.

Professor Blake.

407. Pharmacy: Pharmaceutical Testing and Drug Analysis.

Rec. 1. Lab. 6.

Tests for purity and identity of various Pharmacopœial chemicals. The assay of opium, nux vomica, belladonna, colchicum and cinchona. The assay work includes the standardization of alkaloidal galenicals.

Professor Blake.

409. Food Analysis.—Sem. 1. Rec. 1. Lab. 9.

A study of the composition and method of analysis of leading food products, such as vinegars, fats and oils, dairy products, canned fruits and vegetables, alcoholic liquors, candies, preservatives, etc.

Professor Blake and Assistant Professor Gentry.

COURSES IN OTHER DIVISIONS

For detailed information see description under other departments in this catalogue.

Chemistry

101-2. General Chemistry.—Sem. 1 and 2. Rec. 3. Lab. 0.

103-4. Inorganic Chemistry.—Sem. 1 and 2. Rec. 0. Lab. 2.

105-6. Qualitative Analysis.—Sem. 1 and 2. Rec. 1. Lab. 4.

307. Quantitative Analysis.—Sem. 1. Rec. 1. Lab. 8.

303-4. Organic Chemistry.—Sem. 1 and 2. Rec. 2 and 3. Lab. 0.

209. Organic Chemical Laboratory.—Sem. 1. Rec. 1. Lab. 8.

414. Toxicology and Urinalysis.—Sem. 2. Rec. 1. Lab. 3.

Physiology and Bacteriology**(Veterinary Medicine)**

101. Human Physiology.—Sem. 1. Rec. 3. Lab. 1.

210. Bacteriology.—Sem. 2. Rec. 2. Lab. 4.

Botany and Zoology

201-204. Botany.—Sem. 1 and 2. Rec. 2. Lab. 3.

101-2. Zoology.—Sem. 1 and 2. Rec. 2. Lab. 2.

Physics

203-4. Physics.—Sem. 1 and 2. Rec. 3. Lab. 3.

207-8. Physics Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 2.

Academic

101-2.	English.—Sem. 1 and 2.	Rec. 3.
201-2.	English.—Sem. 1 and 2.	Rec. 3. •
101-2.	History.—Sem. 1 and 2.	Rec. 2.
101-2.	Mathematics.—Sem. 1 and 2.	Rec. 3.
101-2.	German or French.—Sem. 1 and 2.	Rec. 3.
201-2.	German or French.—Sem. 1 and 2.	Rec. 3.

COLLEGE OF ENGINEERING AND ARCHITECTURE

CIVIL ENGINEERING

Professor Callan
Professors Baughman and Hulse
Assistants Davis, Smith and Howard

The Civil Engineering Department of Auburn, the oldest in the South, was organized in 1872. Its aims have always been: *First*; To furnish a broad fundamental training in the arts and sciences upon which the various branches of civil engineering are based.

Second; To develop initiative, resourcefulness and power for independent thought, and

Third; To provide the necessary practical work to make its courses both interesting and valuable, thus enabling the student to enter readily into professional practice after graduation. Such subjects as surveying, mapping, testing and inspecting materials of construction, design of steel and concrete structures, water supply, sewerage, technical writing, valuation, contracts and specifications, and highway engineering are emphasized.

Students in the course in civil engineering are offered in the senior year certain options in mining subjects which may be substituted for an equivalent amount of work in the civil engineering course. The optional subjects are:

Mining Engineering, C. E. 459, 460.—Sem. 1 and 2. Rec. 3.

Economic Geology, Chem. 342.—Sem. 2. Rec. 2.

Metallurgy, Chem. 402.—Sem. 2. Rec. 5.

102. Surveying.—Sem. 2.

Rec. 2. Lab. 2.

Use, care and adjustment of surveying instruments; plotting and calculation of areas and volumes; running levels and plotting profiles; laying grade on sewers and drains.

Professor Hulse.

201. Railroad Surveying.—Sem. 1.

Rec. 2. Lab. 2.

Preliminary surveys; location surveys; construction surveys; simple, compound and spiral curves; grades and vertical curves; cross section and calculation of earthwork; calculation of overhaul; borrow pits.

Prerequisite: Mathematics 102.

Professor Hulse.

202. Topographic Surveying.—Sem. 2.

Rec. 2. Lab. 2

Stadia and hand level methods; conventional signs; parting off land; precise leveling; city and hydrographic surveying and U. S. land surveys.

Prerequisite: C. E. 102.

Professor Hulse.

204. Topographic Mapping.—Sem. 2.

Rec. 0. Lab. 2.

Conventional signs and map work.

Prerequisites: C. E. 102 and C. E. 201.

Professor Hulse.

206. Graphic Statics.—Sem. 2. Rec. 2. Lab. 3.

Geographical representation of stresses in Howe, Pratt, Fink, and other trusses. The student is required to determine and tabulate dead, snow and windload stresses and to combine them so as to determine the maxima and minima.

Professor Hulse.

210. Summer Vacation Work.

All students in the civil and highway engineering courses will be required to furnish evidence of having been employed in engineering work during at least six weeks of vacation following the sophomore year. Students unable to obtain work will be required to submit a report covering one of the following options:

- (a) Investigation by research reading.
- (b) Critical examination of some engineering project.
- (c) Critical reading and abstract of a stated amount from an approved list of books.

The details of these options are prescribed by the department.

Prerequisite: Sophomore standing.

Professor Callan.

301. Structural Details.—Sem. 1. Rec. 1. Lab. 2.

The use of the structural steel handbooks; structural steel fabrication; drafting room conventions and practice; detailed computation of weight of roof or bridge truss, or plate girders; efficiency of riveted connections; beam, post and stringer connections; built-up columns; crossbracing connections; and special training in neat and rapid lettering.

Prerequisite: C. E. 206.

Professor Hulse.

302. Roof Trusses.—Sem. 2. Rec. 1. Lab. 2.

A continuation of C. E. 301. A detailed design is made of typical steel mill building construction, including steel roof truss, purlins, covering and lateral connections. The stress analysis is also made. The weight of a steel structure is computed, and a wooden truss designed and detailed.

Prerequisite: C. E. 301.

Professor Hulse.

303. Field Astronomy.—Sem. 2. Rec. 2. Lab. 2.

A study is made of trigonometric formulæ, measurement of base lines, triangulation, methods of precise leveling, field astronomy, the principles of adjustment of error in engineering problems, and the determination of time, latitude, azimuth, and longitude.

Prerequisite: C. E. 202.

Professor Hulse.

304. Hydraulics.—Sem. 2. Rec. 3. Lab. 0.

A brief treatment of hydrostatics; the flow of liquids over weirs, through pipes and orifices, and consequent losses of head; hydronamics; experimental data; principles of design of water wheels of impulse and turbine type; and design of pipe lines. Considerable problem work is required.

Prerequisite: M. E. 321.

Professor Baughman.

306. Materials of Engineering.—Sem. 2. Rec. 1. Lab. 2.

Methods of production and inspection of the materials of construction; tests in tension and compression, shear and flexure are made, according to latest standards and specifications on such materials as iron, steel, wood, and cement. Stress strain diagrams are plotted. The usual tests on cement, such as specific gravity, fineness, etc., are also made.

Prerequisite: Junior standing.

Professor Callan.

308. Surveying for Architects.—Sem. 2. Rec. 2. Lab. 2.

Problems similar to those encountered in building construction; use of surveying instruments in laying out foundations; planning and staking out drains; and topographic maps of building sites.

Prerequisite: Mathematics 102.

Professor Hulse.

310. Summer Vacation Work.

The same regulations obtain for this course as for C. E. 210.

Professor Callan.

401. Theory of Structures.—Sem. 1. Rec. 3. Lab. 0.

Algebraic and graphic stress computation methods for dead and uniform live loads applied to roof trusses of the various types, cranes, Pratt, Warren, Howe, Pettit, and Camelback bridge trusses. Absolute maximum bending moment, maximum shear and moment at any point due to Cooper's E-60 concentrated moving loads, and mathematical principles underlying such computations.

Prerequisites: C. E. 301 and C. E. 302.

Professor Callan.

402. Theory of Structures.—Sem. 2. Rec. 3. Lab. 0.

A continuation of C. E. 401. Maximum and minimum stresses in trusses of the various types, cross framing, lateral bracing, portals, influence line theory and its advantages as compared with the algebraic methods are considered. Considerable problem work is required in both semesters of this course.

Prerequisite: C. E. 401.

Professor Callan.

403-4. Structural Design.—Sem. 1 and 2. Rec. 1. Lab. 3.

A detailed design is made of a steel office building column, and its connections, steel building railroad deck, and through plate girders, highway and railroad truss bridges of the pony Pratt, and through types, respectively, including all computations, the stress sheets, erection diagrams, layouts, bills of materials, etc., and the results neatly tabulated and drawn.

Prerequisite: C. E. 302.

Professor Callan.

405. Reinforced Concrete.—Sem. 1. Rec. 3. Lab. 0.

The fundamental principles of reinforced concrete construction. Taylor and Thompson's method of getting the most compact concrete from mechanical analysis curves, and the latest experimental data. A rigorous analysis of the theory underlying plane and tee beam, and slab design is made. Considerable problem work is required.

Prerequisites: M. E. 321 and C. E. 301.

Professor Callan.

406. Concrete Design.—Sem. 2. Rec. 1. Lab. 3.

A continuation of C. E. 405. Detailed designs of plane and tee beam, column, and slab construction are required, including schedules for bending of the reinforcement. Reinforced concrete retaining walls of the plain and counterforted types, pipe, box, and arch culverts, stairways, abutments, foundations, and other miscellaneous types are included.

Prerequisite: C. E. 405.

Professor Callan.

407. Water Supply.—Sem. 1. Rec. 3. Lab. 0.

A study is made of supply, quality of water, drinking water and diseases, river and streams, natural purification of water, structures, the design, construction and maintenance of city water works including basins and filters, aqueduct, pipe lines, distributing systems, dams, reservoirs, standpipes, pumping machinery and water power development.

Prerequisite: C. E. 304.

Professor Baughman.

408. Sewerage.—Sem. 2. Rec. 3. Lab. 0.

Design, construction, and maintenance of sewerage systems for towns and cities; treatment of sewage; consideration of run off from paved and built up areas; maximum rainfall, separate and combined systems.

Prerequisite: C. E. 407.

Professor Baughman.

409. Engineering Valuation.—Sem. 1. Rec. 1. Lab. 0.

The fundamental principles of valuation of public utilities and engineering projects.

Prerequisite: Junior standing.

Professor Baughman.

410. Railway Engineering.—Sem. 2. Rec. 2. Lab. 0.

Inception, promotion and organization of railroad projects; alignment and grades; materials and methods of construction; operating, signaling, expenditures; the locomotive; betterment surveys.

Prerequisite: C. E. 201.

Professor Baughman.

411. Seminar and Foundations.—Sem. 1. Rec. 1. Lab. 0.

A course intended to bring the student in touch with phases of civil engineering not encountered in other courses. Presentation and discussion of papers on such subjects as cofferdams, piling, buttresses, efficiency methods, masonry construction, engineering examinations, investigations, reports, stereotomy, erection of falsework, tunneling, blasting, and excavation.

Prerequisite: Senior standing.

Professor Callan.

413. Construction of Graphical Charts.—Sem. 1. Rec. 1. Lab. 0.

Rectilinear, logarithmic, semi-logarithmic, and nomographic or alignment charts are emphasized, and the mathematical principles underlying the construction of the same are analyzed. Study is also made of the development of empirical formulæ from experimental data. Progress reports, cost analysis, scheduling methods. Open elective.

Prerequisite: Math. 103-4.

Professor Callan.

414. Thesis.—Sem. 2.

Rec. 2. Lab. 0.

Each candidate for graduation is required to present a satisfactory thesis to the professor of civil engineering. This subject may be either a design of some engineering structure, or construction method, or an investigation of some engineering problem. The thesis must be of a form prescribed by the department.

Prerequisite: Senior standing.

*Professor Callan.***416. Inspection Trip.**—Sem. 2.

An extended trip of inspection of engineering activities is made in the Birmingham district each year. The department arranges the trips at as low a cost as possible commensurate with the purpose desired. A large number of Auburn's prominent alumni are in charge of work in the district and they are always glad to facilitate the trip in every way possible. A week is required for the trip.

*Professor Callan.***459-460. Mining Engineering.**—Sem. 1 and 2. Rec. 3. Lab. 0.

Plans of mines, trackwork, haulage, hoisting, ventilation, drainage, design of tipples and other mine structures, selection and layout of general mining equipment.

*Professor Callan.***501-2. Advanced Stress Analysis.**—Sem. 1 and 2.

Rec. 3.

Certain subjects covered in senior year are reviewed at length. Stress analysis of miscellaneous structures; the method of coefficients; application of influence line theory applied to truss problems, and deflection of structures.

Prerequisites: 401-2.

*Professor Callan.***503-4. Engineering Design.**—Sem. 1 and 2. Rec. 1. Lab. 3.

Complete designs are drawn for miscellaneous engineering structures from assigned data. Special attention is always given to the factory, warehouse, or high building construction, railroad bridge trusses, train sheds, or through plate girders.

Prerequisites: C. E. 403-4.

*Professor Callan.***505-6. Advanced Reinforced Concrete.**—Sem. 1 and 2.

Rec. 2. Lab. 3.

A thorough inquiry into latest experimental data on reinforced concrete; complete working plans for retaining walls; warehouse construction; piers, abutments; footings, etc.

Prerequisite: C. E. 405-6.

*Professor Callan.***507-8. Materials of Construction.**—Sem. 1 and 2. Rec. 2. Lab. 0.

Subjects hurriedly covered in C. E. 306 are reviewed at length. Current literature is analyzed; and the latest experimental data as described in Johnson, Withy, and Aston's "Materials of Construction" studied.

Prerequisite: C. E. 306.

*Professor Callan.***509-10. Thesis.**—Sem. 1 and 2.

Rec. 3. Equivalent.

Graduate students applying for degree of Civil Engineer will be required to prepare and present a thesis the regulations for which are the same as those prescribed for seniors. The thesis, however, must be more exhaustive in scope and original in nature.

Prerequisite: Bachelor's degree.

Professor Callan.

ELECTRICAL ENGINEERING*Professor Dunstan**Professor Hill**Instructor McIlvaine**Laboratory Assistants Neely and Looney***301. Electrical Engineering.—Sem. 1. Rec. 3. Lab. 0.**

Design, construction, installation, and operation of direct current generators and motors. The selection of machinery for given conditions, performance guarantees, acceptance tests for heating, efficiencies, parallel running troubles, remedies and repairs.

*Professor Dunstan.***302. Electrical Engineering.—Sem. 2. Rec. 3. Lab. 0.**

Central station appliances and distribution for lighting and power service by direct currents; switch boards and appliances; calculation of circuits of various kinds; arc and incandescent lighting, metering, systems of charging for service, economics of generating plants.

*Professor Dunstan.***303-4. Electrical Engineering.—Sem. 1 and 2. Rec. 3. Lab. 0.**

Direct and alternating machinery. Direct current generators, motors, and other appliances; alternators, transformers, and other alternating current appliances.

*Professor Dunstan.***305. Electrical Engineering.—Sem. 1. Rec. 2. Lab. 0.**

A study of the fundamental laws of electricity and magnetism. For non-electrical engineering students.

*Professor Hill.***306. Electrical Engineering.—Sem. 2. Rec. 2. Lab. 0.**

Construction and operation of direct and alternating current machines; tests for efficiency, regulation, and heating; generation and distribution of electric power.

*Professor Hill.***311. Electrical Engineering.—Sem. 1. Rec. 2. Lab. 0.**

Wiring and illumination; laws of illumination, calculation of lighting and power circuits, costs of wiring, insurance rules governing the installation of wires, and wiring specifications.

*Professor Hill.***313. Electrical Laboratory.—Sem. 1. Rec. 1. Lab. 4.**

Galvanometer work, resistance and magnetic measurements, operation of direct current motors and dynamos, characteristics of direct current machinery, methods of adjusting and compounding.

*Professor Hill and Assistant McIlvaine.***314. Electrical Laboratory.—Sem. 2. Rec. 1. Lab. 4.**

Efficiency tests, location of troubles in machine and on line, switch boards and appliances, and general experience in the operation of a direct current station.

Professor Hill and Assistant McIlvaine.

421. Electrical Engineering.—Sem. 1. Rec. 5. Lab. 0.

Alternating current generators, calculation of alternator voltage, regulation by various methods, parallel running, transformers, induction motors, synchronous motors and rotaries; harmonic analysis of wave forms, and expression of the same in Fourier series and calculation of current produced in various circuits.

Prerequisite: Math. 201-2.

Professor Dunstan.

422. Electrical Engineering.—Sem. 2. Rec. 5. Lab. 0.

Line inductance and capacity, the application of hyperbolic functions to the calculation of long transmission lines, effect of harmonics in E. M. F. wave surges. Stresses in conductors and line construction.

Professor Dunstan.

425-6. Electrical Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 3.

Operation of alternating current machinery, calculating alternator regulation, efficiency tests, transformer connections, transformer testing for efficiency and regulation, induction motor testing, circle diagram, brake tests, single phase motors, synchronous motors, V-curves, rotaries.

Professor Dunstan.

427. Telephone Engineering.—Sem. 1. Rec. 2. Lab. 0.

Telephone types, substation equipment, magneto and common battery switch boards, exchange equipment, telephone power plants, overhead and underground circuits, protectors, coin collectors and meters, party lines, branch exchanges, trunking and toll boards.

Professor Hill.

429. Telephone Laboratory.—Sem. 1. Rec. 0. Lab. 3.

Details of telephone construction, assembly of switch board parts, storage batteries, location of faults in cable and lines, capacity and insulation tests, common battery and magneto switch boards, and trunking schemes.

Professor Hill.

430. Electrical Engineering.—Sem. 2. Rec. 2. Lab. 0.

Electric railways; street and interurban service, train resistance, grades, curves, line and track, car and power plant equipment, both direct and alternating currents, substations and related topics.

Professor Hill.

431-2. Electrical Engineering.—Sem. 1 and 2. Rec. 3. Lab. 0.

Direct current motors and generators; alternating currents and alternating current machinery. For students in special course.

Professor Hill.

433-4. Electrical Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 4.

Laboratory work suitable for above special course.

Professor Hill.

435. Current Technical Reading.—Sem. 2. Rec. 1. Lab. 3.

Using The Electrical World as a basis, the developments of new equipment, construction news, markets and prices of electrical goods, and the general news of the day in the electrical field, are discussed. Two or more main articles are read and discussed each week.

Professor Hill.

133-4. Wireless Telegraphy.—Sem. 1 and 2. Rec. 1. Lab. 4.

The practice work in this subject is under the charge of a licensed wireless operator. Every effort is made to offer to students opportunities to become familiar with the setting up, installation, and testing of wireless apparatus, as well as to become expert in sending and receiving.

Professor Dunstan and Assistant Neely.

Vocational Course

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Instructor McIlvaine.

HIGHWAY ENGINEERING

Professor Baughman

301. Highway Engineering.—Sem. 1. Rec. 3. Lab. 0.

Economic principles of road improvement; location, grades, and drainage of roads, materials and types of construction; street plans for cities and towns.

Professor Baughman.

302. Highway Engineering.—Sem. 2. Rec. 3. Lab. 0.

Continuation of 301.

Professor Baughman.

303. Highway Engineering.—Sem. 1. Rec. 0. Lab. 2.

Testing the physical properties of non-bituminous road building materials.

Professor Baughman.

304. Highway Laboratory.—Sem. 2. Rec. 0. Lab. 2.

Testing bituminous road building materials, and the design of roads.

Professor Baughman.

313. Paving Assessments.—Sem. 1. Rec. 1. Lab. 0.

Economic principles involved in paying for street improvements.

Professor Baughman.

405-6. Highway Engineering.—Sem. 1 and 2. Rec. 3. Lab. 0.

Highway laws and finance; bonds and amortization, organization of highway construction; inspection problems; reports; promotion work.

Professor Baughman.

407. Highway Laboratory.—Sem. 1. Rec. 0. Lab. 3.

Advanced laboratory work in testing materials used in the construction of highways.

Professor Baughman.

408. Highway Laboratory.—Sem. 2. Rec. 0. Lab. 3.

Advanced problems in highway design.

Professor Baughman.

409-410. Highway Engineering.—Sem. 1 and 2. Rec. 1. Lab. 0.

An elementary elective course in streets and roads for students not taking the longer courses in highway engineering.

Professor Baughman.

411. Highway Engineering.—Sem. 1 or 2. Rec. 2. Lab. 0.

An elective course in streets and roads for students not taking the longer courses in highway engineering.

Professor Baughman.

412. **Highway Engineering.**—Sem. 1 or 2. Rec. 2. Lab. 0.
Continuation of H. E. 411. *Professor Baughman.*
414. **Seminar.**—Sem. 1 and 2. Rec. 1. Lab. 0.
415. **Thesis.**—Sem. 2. Rec. 0. Lab. 3.

MACHINE DESIGN AND MECHANICAL DRAWING

Professor Fullan
Professor Thomas
Instructor Hanna
Assistant Festorazzi

151. **Mechanical Drawing.**—Sem. 1. Rec. 0. Lab. 4.

Drafting practice given includes: Freehand lettering; linear drawing and geometrical constructions; orthographic projections, sections, and intersections; development of surface and construction of models.

Credit is given only for work as completed in the drawing room by students in regular attendance of the class. Plates drawn outside will not be accepted.

Professor Thomas and Assistant Festorazzi.

152. **Descriptive Geometry.**—Sem. 2. Rec. 0. Lab. 4.

Prerequisite: Drawing 151.

Theory of projections:—point, line, and plane; shades and shadows.

Especial attention is given to the development of the imagination of the student through visualization of all problems assigned.

Professor Thomas and Assistant Festorazzi.

251. **Descriptive Geometry.**—Sem. 1. Rec. 2. Lab. 4.

Prerequisite: Drawing 152.

Problems in projection of plane curves, space curves, tangents, and normals; sections, and tangent planes, single curved, double curved, and warped surfaces. Intersections of all classes of surfaces, and practical applications of descriptive geometry to engineering work.

Professor Thomas and Instructor Hanna.

253. **Engineering Drawing.**—Sem. 1. Rec. 0. Lab. 6.

Prerequisite: Drawing 151.

Instruction and drafting room practice in sketching of machine parts, assembly and detail drawing, dimensioning, bills of material, cabinet and isometric projection, shading, patent office drawing, type of lettering and correct method of presentation for patent.

Instructor Hanna.

254. **Engineering Drawing.**—Sem. 2. Rec. 0. Lab. 4.

Prerequisite: Drawing 151.

Special attention is given to neatness, accuracy and rapidity in drafting and lettering. The form, proportion and spacing of lettering; electric symbols and wiring diagrams; piping systems for power plants, heating systems, refrigerating and chemical plants; element of structural drafting, and machine parts such as gears, cams, and screws; tracing and blue printing, and reading and checking working drawings.

Instructor Hanna.

256. Theory of Machines.—Sem. 2. Rec. 3. Lab. 0.

(a) Kinematics: Motion in machines is analyzed by means of kinematic chains, velocity diagrams, cams, gear wheels, screws and link work. Illustrated lectures showing the application of mechanism to design of machines are given throughout the course.

Professor Fullan.

342. Motion Picture Projection.—Sem. 2. Rec. 1. Lab. 3.

Prerequisite: Physics 205, or Elec. 313.

A course in visual education is offered to meet the needs of prospective teachers, salesmen, county, and home demonstration agents, consisting of lectures and laboratory work embracing:

(a) Visual instruction methods, materials, and relative values of presentation.

(b) Electrical elements:—motors, transformers, projection lamps.

(c) The optics of projection apparatus: lenses and condensers.

(d) Operation, repair, and care of commercial apparatus, portable projectors, stereopticon, and automatic "daylight" exhibition outfits.

(e) Repair and care of films and lantern slides.

(f) Study of booths:—design, materials, placement of equipment, fire insurance regulations.

(g) Installation projects:—capacity and type of all equipment.

(h) Training of employees through visual presentation of factory methods, machinery, and systems.

(i) Training of sales force through visual explanation of the "talking points" of accurate production methods, and films showing actual uses of the manufactured articles.

(j) Use of lantern slides and motion pictures in extension service, demonstrating agricultural methods, machinery, and improvements in all things relating to the farmer, his work and home.

(k) Business administration: organization of the industry; relations of the producing corporation, distributing exchange, and the exhibitor.

Professor Thomas.

351-2. Farm Shop Work.—Sem. 1 and 2. Rec. 0. Lab. 4.

The course is arranged for students of the senior class in vocational agriculture. The work is prepared with the view of familiarizing the student with the use of tools through exercise in the construction of full size projects used on the farm.

(a) *Farm Carpentry*: Chicken and hog feeders, fruit dryers, orchard ladders, feeding troughs, swine houses, farm gates, wagon bodies, shipping crates, etc.

(b) *Farm Blacksmithing*: Gate hooks and staples, hinges, clevises, swivels, rings, chains, wagon irons and bolts; soldering and brazing; sharpening of picks and plows; horse-shoeing.

Professor Fullan.

355. Graphics of Machines.—Sem. 1. Rec. 2. Lab. 0.

Graphic methods are applied to the design of structures and machine frames; the investigation of friction losses and the efficiency of mechanisms; to the balancing of engines and to the determination of stresses due to inertia of moving parts.

Professor Fullan.

361-2. Machine Design.—Sem. 1 and 2. Rec. 0. Lab. 4.

(a) Design of machine parts: Cams, gear wheels, quick return motions, link combinations and machine fastenings. Tracings and blue prints of problems are required in order to familiarize the student with drafting room practice.

(b) Inventive Design: The course consists of problems in invention which are developed by drawings and specifications in form corresponding to that required by the United States Patent Office. The purpose of the course is to develop the inventive capacity of the student through simple problems which are rated on originality, adherence to specifications, clearness, accuracy and neatness.

Professor Fullan.

364. Machine Design.—Sem. 2. Rec. 1. Lab. 0.

The lectures cover general instructions, such as the selection of materials for machines, proportion of parts to secure symmetry, strength and cheapness of manufacture. Problems include the calculation of machine parts and design of mechanisms. Illustrated lectures are given at intervals throughout the year.

Professor Fullan.

461-2. Machine Design.—Sem. 1 and 2. Rec. 2. Lab. 0.

The work offered during the senior year is an extension of that of the junior year. Lectures include problems which involve the manufacture of machines and machine parts, and the application of graphical methods of calculation and the use of factors of enlargement and reduction applied in current practice. A research study into the patent office records of some machine or device is given for the purpose of developing the inventive capacity of the student.

Professor Fullan.

469-470. Machine Design.—Sem. 1 and 2. Rec. 0. Lab. 3.

The course includes the solution of problems involving the design of complete machines to work under specific conditions, accompanied by full assembly and detailed drawings, tracings and blue prints.

Professor Fullan.

471. Engineering Writing.—Sem. 1. Rec. 1. Lab. 3.

The purpose of the course is to familiarize the students with the forms of technical writing and to provide exercise with written work. The lectures include a study of graphic methods in presenting facts, charts, curves and diagrams; engraving processes and the preparation of drawings for illustration; photographic illustrations; use of camera; study of trade catalogues, patent office reports, magazines and scientific papers.

Professor Fullan.

475. Engineering Contracts and Specifications.—Sem. 1.

Rec. 1. Lab. 0.

The work is given in lectures and recitations upon engineering specifications and the elements of the laws of contracts. Exercises in the writing of specifications for machinery and engineering work are submitted by the student in a notebook. Each student is assigned an engineering project for which full specifications, and contract in legal and approved form are required.

Professor Fullan.

481. Engineering Relations.—Sem. 1. Rec. 2. Lab. 0.

This course is given to engineering students in the senior year. The lectures include the following: The engineer and his education; success in the engineering profession; self-knowledge and understanding of men; professional improvement; habits and associations; psycho-analysis applied to employment of men; personal and ethical relations; the engineer as an agent and as an arbiter; the expert witness; the engineer as a citizen; conduct in professional service.

Professor Fullan.

561-2. Machine Design.—Sem. 1 and 2. Rec. 3. Lab. 0.

The work given in the graduate year is an extension of the senior course, with emphasis on development of rational and empirical formulas used in design calculations; the collecting of data and making charts and curves from which empirical formulas are derived. A course in reading of articles on phases of machine design is given throughout the year and a written digest of these articles is required.

Professor Fullan.

Vocational Courses

Special courses are offered for disabled soldiers who are assigned to the institution by the United States Veterans' Bureau and who are not prepared to take the regular courses described above.

Professor Fullan and Instructor Hanna.

MECHANICAL ENGINEERING

Professor Wilmore

Professor Hixon

Assistant Professor Moore

Instructors Carlovitz, Jones

Laboratory Assistants McDonald, Logan, and Sampley

101. Shop Work.—Sem. 1 or 2. Rec. 0. Lab. 3.

(a) Carpentry: The use of tools, different kinds of joints used in carpentry and cabinet work, with some construction and project work.

(b) Wood Turning. Plain and spherical turning and chuck work followed by exercises on whole and split patterns and core boxes.

(c) Blacksmithing. Drawing, upsetting, bending and welding, also forming, hardening and tempering of steel. Work in electric welding and in oxy-acetylene welding and cutting will be given.

Instructor Jones and Assistants Logan and Sampley.

107. Heat Engines.—Sem. 1 or 2. Rec. 2. Lab. 0.

An elementary descriptive course in which attention is called to the different types of engines and boilers, valve gears and valve setting, piping systems and auxiliary apparatus for power plants.

Professors Hixon and Moore, and Instructor Carlovitz.

108. Gas Engines.—Sem. 2.

Rec. 2. Lab. 0.

A descriptive course in gas, gasoline, and oil engines; different types, different cycles, carburetion, ignition troubles, and remedies.

Instructor Carlovitz.

213-4. Shop Work.—Sem. 1 and 2.

Rec. 0. Lab. 6.

Bench and vise work including chipping, filing and scraping, and machine tool work in turning, boring, screw cutting, planing and milling. Some tool making and repair work are given.

Professor Moore and Assistant McDonald.

234. Mechanical Laboratory.—Sem. 2.

Rec. 0. Lab. 2.

Calibration of instruments, indicator work, valve setting, coal and furnace gas analysis, and lubricant testing.

Professor Hixon and Instructor Carlovitz.

321. Applied Mechanics.—Sem. 1.

Rec. 3. Lab. 0.

The fundamental laws of mechanics are studied while special attention is given to the application of these principles to engineering problems.

Professors Hixon and Moore.

322. Strength of Materials.—Sem. 2.

Rec. 3. Lab. 0.

The properties and characteristics of the materials of engineering construction are studied, and the development of methods of calculating stress under different conditions of load is explained. Problems are given on beams, girders, columns, shafts, and built-up structures.

Professors Hixon and Moore.

331-2. Mechanical Laboratory.—Sem. 1 and 2.

Rec. 0. Lab. 2.

Calibration of instruments; adjustment and operation of gas, gasoline, and steam engines; efficiency tests of machines such as hoists, jack screws, gearing, belts, and other transmission devices; valve setting and power measurements.

Professor Hixon and Instructor Carlovitz.

346. Hydraulics.—Sem. 2.

Rec. 3. Lab. 0.

Pressure on dams and gates; flow through orifices, pipes, channels, and over weirs; theory of impulse wheels, turbines, and pumps. Rainfall, run off, evaporation and seepage.

Professors Hixon and Moore.

347. Materials of Engineering.—Sem. 2.

Rec. 2. Lab. 0.

Manufacture of iron, steel, and cement; casting and heat, treatment of metals; stresses, elastic limit, and ultimate strength; uses and characteristics of the materials of construction such as iron, steel, various alloys, timber, cement, and concrete.

Professor Moore and Instructor Carlovitz.

441. Thermodynamics.—Sem. 1.

Rec. 3. Lab. 0.

The fundamental principles underlying the transformation of heat into work are studied. Gases are first considered and later the saturated and superheated vapors used in commercial work. The cycles and efficiencies of steam engines, internal combustion engines, hot air engines, air compressors, and refrigerating machines are studied.

Professor Hixon.

442. Power Plant Engineering.—Sem. 2. Rec. 5. Lab. 0.

A study is made of the practical applications of power plant machinery. The different elements are considered and the efficiencies of different combinations discussed. Problems are solved involving the designing of plants for a specific service, including estimate of cost and operating expense.

Professor Hixon.

443. Hydraulic Machinery.—Sem. 1. Rec. 2. Lab. 0.

A study of the types and characteristics of pumps and other hydraulic machines. High lift and low lift, reciprocating, displacement, and centrifugal pumps, reaction and impulse turbines, and their applications.

Professor Wilmore.

445. Heating and Ventilation.—Sem. 1. Rec. 2. Lab. 0.

Different methods of heating and ventilating buildings. The relative efficiency of hot water, steam, and warm air as mediums for heating different kinds of buildings. Attention is given to the design and operation of healthful heating systems for residences.

Professor Wilmore.

446. Refrigeration.—Sem. 2. Rec. 2. Lab. 0.

The refrigeration cycle, types of machines and auxiliaries. Applications in cold storage, ice making, the cooling of buildings, and in various manufacturing processes.

Professor Wilmore.

451. Mechanical Laboratory.—Sem. 1. Rec. 0. Lab. 3.

Fuel analysis and heat determination, flue gas analysis, oil and lubricant testing, and valve setting and indicator analysis. Tests of engines, boilers, pumps, gas and gasoline engines, complete power plants, and when opportunity offers, tests of commercial plants.

Professor Hixon and Instructor Carlovitz.

452. Mechanical Laboratory.—Sem. 2. Rec. 0. Lab. 6.

The course includes work in testing the strength of materials, as iron, steel, wood, cement in tension, compression and transverse loading, and the calibration of weirs, nozzles, and meters, a study of the flow of water in pipes, and the testing of hydraulic motors and pumps.

Professor Hixon and Instructor Carlovitz.

448. Industrial Management.—Sem. 2. Rec. 2. Lab. 0.

Organization of industry, wage payment systems, estimating and figuring costs, efficiency methods, relations between employees and employers, labor unions, and planning industrial plants.

Professor Wilmore.

Graduate Students**563. Power Plant Engineering.**—Sem. 1. Rec. 3. Lab. 0.

(a) Theory, design, and details of modern steam turbines.
(b) Power plant design; conditions of maximum efficiency; relation of different elements of power plants to each other; actual plants are studied and designs worked out.

Professor Wilmore.

564. Industrial Engineering.—Sem. 2. Rec. 3. Lab. 0.

Organization of industry; cost keeping systems; wage systems; employment methods; industrial betterments; planning of industrial plants.
Professor Wilmore.

566-7. Mechanical Laboratory.—Sem. 1 and 2. Rec. 0. Lab. 3.

Laboratory work supplementary to the class work is provided.
Professor Hixon.

ARCHITECTURE

Professor Biggin
Assistant Professor Barlow
Instructor Spratling
Assistants Wellborn and Riley

The Department of Architecture was established in June of 1907. Four-year courses are offered in Architecture and Architectural Engineering, both leading to the degree of Bachelor of Science. The schedules conform to the "standard minima" of the Association of Collegiate Schools of Architecture. A two-year special course in architecture is offered for the benefit of mature draftsmen.

The course in architecture should be chosen by men and women who desire to follow architecture as an art, and the first requirement is the ability to design. Facility in design depends on a knowledge of what others have done and on the trained power to express one's ideas graphically. So the history of architecture, painting and sculpture are taught in lantern lectures accompanied by library research work and sketching, while freehand drawing in its various forms of pencil, charcoal, pen and ink, water color and clay modeling runs throughout the course.

Architectural design embraces as inseparable parts both design and construction, and is taught by problems requiring a month or more for solution and developed by the student under constant personal criticism. These are accompanied by short sketch problems to promote quickness of thought and execution, with no criticism until after they are turned in for judgment. The subjects and terms of all problems follow as closely as possible the practice of an architect's office. A general course in building construction and superintendence is supplemented by special work in the various engineering departments of the college along such lines as wiring and illumination, heating and ventilation, reinforced concrete and steel frame fireproof construction.

The course in architectural engineering is for those whose preference leans strongly toward the structural side of architecture. Less design and freehand drawing are required in this course and much more time is devoted to advanced engineering construction. It prepares men therefore to specialize along construction lines in their architectural practice or to excel in the field of large-scale contracting.

Since the important practical side of architecture can be obtained only by office experience, all students are urged to spend at least a part of the summer vacation working with a practicing architect. Such students make more rapid progress in their subsequent college work and college credit is therefore given for this.

- 121. Freehand Drawing.**—Sem. 1. Rec. 0. Lab. 3.

Work in pencil from casts of architectural ornament, architectural fragments and parts of the figure.

Instructor Spratling and Assistant Riley.

- 122. Freehand Drawing.**—Sem. 2. Rec. 0. Lab. 3.

Work in pencil and pen and ink from casts and photographs.

Prerequisite: Arch. 121.

Instructor Spratling and Assistant Riley.

- 123. Water Color.**—Sem. 1. Rec. 0. Lab. 3.

Work from models, photographs and still life. Conventional and sketch rendering of architectural subjects.

Instructor Spratling.

- 124. Water Color.**—Sem. 2. Rec. 0. Lab. 3.

Color composition and architectural rendering.

Prerequisite: Arch. 123.

Instructor Spratling.

- 141. Descriptive Geometry.**—Sem. 1. Rec. 1. Lab. 3.

The fundamental principles of descriptive geometry are studied and applied to the solution of problems in architecture. Shades and shadows.

Prerequisite: Solid Geometry.

Professor Biggin and Assistant Wellborn.

- 142. Descriptive Geometry.**—Sem. 2. Rec. 1. Lab. 3.

Intersections and developments. Isometric and oblique projections. Perspective.

Prerequisite: Arch. 141.

Professor Biggin and Assistant Wellborn.

- 191. Architectural Design.**—Sem. 1. Rec. 1. Lab. 6.

Elementary architectural composition. Lectures and library research, with drawings in pencil and ink, rendered in wash or color.

Assistant Professor Barlow and Assistants Wellborn and Riley.

- 192. Architectural Design.**—Sem. 2. Rec. 1. Lab. 6.

Architectural composition. Lectures, library research and drawing.

Prerequisite: Arch. 191.

Assistant Professor Barlow and Assistants Wellborn and Riley.

- 201. History of Architecture.**—Sem. 1. Rec. 2. Lab. 0.

Origin and development of historic styles of architecture and ornament from early times to the fall of the Roman Empire, stress being laid on the evolution of a style from changes in structural forms, political and religious conditions, and national character. Early Christian and Byzantine architecture. Lectures, with library research and sketching.

Professor Biggin.

- 202. History of Architecture.**—Sem. 2. Rec. 2. Lab. 0.

Romanesque and Gothic architecture and ornament. Lectures, with library research and sketching.

Prerequisite: Arch. 201.

Professor Biggin.

- 221. Charcoal Drawing.**—Sem. 1. Rec. 0. Lab. 3.
Work in charcoal from casts of architectural subjects and antique sculpture.
Prerequisite: Arch. 122. *Instructor Spratling.*
- 222. Charcoal Drawing.**—Sem. 2. Rec. 0. Lab. 3.
Work in charcoal, pastel and pen and ink from casts, photographs and life.
Prerequisite: Arch. 221. *Instructor Spratling.*
- 223. Water Color.**—Sem. 1. Rec. 0. Lab. 3.
Advanced work from models and still life.
Prerequisite: Arch. 124. *Instructor Spratling.*
- 224. Water Color.**—Sem. 2. Rec. 0. Lab. 3.
Work in original composition and from life.
Prerequisite: Arch. 223. *Instructor Spratling.*
- 271. Building Construction.**—Sem. 1. Rec. 2. Lab. 0.
Materials of construction: properties, manufacture and use of timber, stone, brick, terra cotta, iron, steel, lime, cement, gypsum products, tile, glass, paint, and hardware.
Professor Biggin.
- 272. Building Construction.**—Sem. 2. Rec. 2. Lab. 0.
Construction methods and equipment: preparation of site, foundations, walls, floors, roofs, stairs and elevators; hoists, derricks and scaffolds; equipment for excavating, material transporting, piling, pumping, wood working, erection of reinforced concrete and steel work. Mill and fireproof construction.
Prerequisite: Arch. 271. *Professor Biggin.*
- 291. Architectural Design.**—Sem. 1. Rec. 1. Lab. 9.
Architectural composition and planning. Lectures, library research and drawing.
Prerequisite: Arch. 192.
Assistant Professor Barlow and Assistants Wellborn and Riley.
- 292. Architectural Design.**—Sem. 2. Rec. 0. Lab. 9.
Problems in architectural composition and planning, and studies of detail. Library research and drawing.
Prerequisite: Arch. 291.
Assistant Professor Barlow and Assistants Wellborn and Riley.
- 301. History of Architecture.**—Sem. 1. Rec. 2. Lab. 0.
Architecture and ornament of the Renaissance and modern times. Lectures, with library research and sketching.
Professor Biggin.
- 302. History of Architecture.**—Sem. 2. Rec. 2. Lab. 0.
Colonial and more recent architecture in America. Lectures, with library research and sketching.
Prerequisite: Arch. 301. *Professor Biggin.*

- 321. Sketching.**—Sem. 1. Rec. 0. Lab. 3.
Out-of-door sketching in pencil, charcoal or water color.
Prerequisite: Arch. 122. *Instructor Spratling.*
- 322. Sketching.**—Sem. 2. Rec. 0. Lab. 3.
Continuation of out-of-door sketching.
Prerequisite: Arch. 321. *Instructor Spratling.*
- 325. Clay Modeling.**—Sem. 1. Rec. 0. Lab. 3.
Modeling from architectural casts, photographs and sketches.
Instructor Spratling.
- 326. Clay Modeling.**—Sem. 2. Rec. 0. Lab. 3.
Modeling from casts and original composition in the solid.
Preparation of molds and plaster casts.
Prerequisite: Arch. 325. *Instructor Spratling.*
- 373. Plumbing and Drainage.**—Sem. 1. Rec. 2. Lab. 0.
General sanitation; water supply, filtration and softening; pumping and storage; fire lines; supply, vent and waste systems; plumbing fixtures; sewage disposal.
Professor Biggin.
- 391. Architectural Design.**—Sem. 1. Rec. 0. Lab. 15.
Problems in architectural composition, planning and construction. Library research and drawing.
Prerequisite: Arch. 292.
Professor Biggin and Assistant Professor Barlow.
- 392. Architectural Design.**—Sem. 2. Rec. 0. Lab. 15.
Continuation of problems in architectural composition, planning and construction. Library research and drawing.
Prerequisite: Arch. 391.
Professor Biggin and Assistant Professor Barlow.
- 401. History of Painting.**—Sem. 1. Rec. 1. Lab. 0.
A brief survey of the development of painting with special reference to mural work. Lectures and library research.
Professor Biggin.
- 402. History of Sculpture.**—Sem. 2. Rec. 1. Lab. 0.
An outline study of the development of sculpture and its relation to architectural design. Lectures and library research.
Professor Biggin.
- 421. Life Class.**—Sem. 1. Rec. 0. Lab. 3.
Figure work from life, in color or black and white.
Prerequisite: Arch. 122. *Instructor Spratling.*
- 422. Life Class.**—Sem. 2. Rec. 0. Lab. 3.
Drawing or modeling from life.
Prerequisite: Arch. 421. *Instructor Spratling.*
- 476. Fire Resisting Structures.**—Sem. 2. Rec. 1. Lab. 6.
Special study of fire resisting materials as applied to the design and construction of reinforced concrete and steel frame fireproof buildings.
Prerequisites: Arch. 392, M. E. 322 and C. E. 405.
Professor Biggin and Assistant Professor Barlow.

478. Specifications and Contracts.—Sem. 2. Rec. 2. Lab. 0.

Preparation of specifications, estimates and contracts. Relations between architect, owner and contractor, and laws affecting same. Professional ethics and practice.

Prerequisite: Arch. 392.

Professor Biggin.

491. Architectural Design.—Sem. 1. Rec. 0. Lab. 21.

Advanced problems in architectural composition, planning and construction. Group problems. Library research and drawing.

Prerequisite: Arch. 392.

Professor Biggin and Assistant Professor Barlow.

492. Architectural Design.—Sem. 2. Rec. 0. Lab. 21.

Continuation of advanced problems in architectural composition, planning and construction. Library research and drawing.

Prerequisite: Arch. 491.

Professor Biggin and Assistant Professor Barlow.

Graduate Students

Graduate work is offered by the department in History, Drawing, Construction and Architectural Design. Courses and hours will be arranged to fit individual requirements. The graduate in architecture working toward the master's degree will major in design and the graduate in architectural engineering will major in construction. Both will take sufficient additional courses to total 30 semester hours.

One or more of the fellowships offered by the college to promote graduate study and amounting to two hundred and twenty-five dollars per annum, are open to graduates of this department or those of other collegiate schools of architecture of equal grade. The holders are required to assist with instruction work in the department.

COLLEGE OF VETERINARY MEDICINE

VETERINARY MEDICINE

Professor Cary

Professor McAdory

Assistant Professors Sugg, Ferguson, and Covington

Special Lecturers White and Winters

The Veterinary Medical Course embraces eight semesters of four years of specific work, and leads to the degree of Doctor of Veterinary Medicine. It was established to meet the demands of young men who desire to become educated veterinarians and for students who wish to prepare for the study of human medicine.

COURSE OF STUDY

The four-year veterinary course students take two years of work in the department of animal husbandry and dairying; one semester of work in pharmacy; four semesters of work in the chemical department; one semester of work in botany, and one year's work in English.

The veterinary course is especially strong in practical laboratory work.

1. In anatomy the work of dissection is continued through the first, second and third years. Special stress is given to comparative anatomy of the horse, ox, sheep, swine, dog, cat, rabbit and poultry.

2. Clinical laboratory work is also required throughout the course. The clinical work comes six days in the week and the cases presented embrace mules, horses, cattle, sheep, dogs, poultry and hogs. The variety is such as to illustrate a large number of diseases, surgical operations, and therapeutic applications.

3. The physiological laboratory is supplied with apparatus for tests and experiments in physiology.

4. The laboratory for pathology, histology, and bacteriology is extensive and is fully fitted with the latest apparatus.

5. In chemistry and toxicology the students work in one of the best chemical laboratories.

6. In pharmacy the students work in practical pharmacy for six hours a week for one semester. In this they learn to recognize, compound and dispense drugs.

7. The animal husbandry department affords ample facilities for practice in feeding and judging cattle, sheep, hogs, horses and mules.

8. The dairy department gives practical laboratory work in dairy operations and in handling and feeding dairy cattle.

9. The botanical department is well equipped and gives excellent opportunity for laboratory work in poisonous and medicinal plants.

10. The subjects in the course of study are such as are required in the leading veterinary colleges of America. The course meets the requirements of the American Veterinary Medical Association and the Bureau of Animal Industry and the United States Civil Service Commission. It is the aim to

have the teaching staff meet the requirements of the best standards. The length of the course is four years of nine months each.

Graduates of the College of Veterinary Medicine are admitted by civil service examinations to the appointments in the service of the Bureau of Animal Industry of the United States Department of Agriculture and to the army, and also to membership in the American Veterinary Medical Association.

DESCRIPTION OF COURSES

101. Physiology.—Sem. 1. Rec. 3. Lab. 1.

Required of students in Pharmacy, Home Economics, and Veterinary Medicine. The aim of this course is to teach anatomy, histology, hygiene, sanitation and physiology. The instruction is given by lectures, demonstrations and textbook.
Assistant Professor Covington.

103-4. Anatomy.—Sem. 1. Lab. 4.
Sem. 2. Lab. 10.

Consists chiefly of dissection with quizzes and reviews. It embraces during the year (a) Osteology, a study of the bones; (b) Arthology, a study of the articulations; (c) Myology, a study of the structure, form and relations, attachments and functions of muscles.
Professor McAdory.

105-6. Histology and Embryology.—Sem. 1 and 2. Rec. 2. Lab. 4.

The course treats of the microscopic anatomy of the body, and includes fixing, imbedding, sectioning, mounting, staining and microscopic study of the cellular and inter-cellular structure of tissues. This includes embryology. It is taught by lectures, textbooks and laboratory work.

Assistant Professor Sugg.

107-8. Clinics.—Sem. 1 and 2. Lab. 3.

A general polyclinic. *Professors Cary and McAdory.*

201-2. Veterinary Physiology.—Sem. 1. Rec. 3. Lab. 2.
Sem. 2. Rec. 1. Lab. 2.

A study of normal actions or functions of secretions, tissues, organs and apparatus of the bodies of domestic animals in health.

Assistant Professor Covington.

203-4. Anatomy.—Sem. 1. Lab. 8.
Sem. 2. Lab. 4.

A study of (a) internal organs; (b) blood vessels, heart, lymph vessels and glands; (c) the nervous system; (d) special sense organs; (e) genito-urinary organs; (f) the foot; (g) the larynx.
Professor McAdory.

206. Veterinary Medicine.—Sem. 2. Rec. 3.

A study of the special pathology, etiology, symptoms, diagnosis, prognosis, and treatment of internal diseases of horses and mules.
Assistant Professor Ferguson.

- 207-8. Clinics.**—Sem. 1. Lab. 6.
Sem. 2. Lab. 4.

The course takes up the practical and laboratory methods of making a clinical diagnosis of the various surgical and internal diseases of domestic animals. All cases are examined, studied and recorded by the students.

Professors Cary, McAdory; Assistant Professors Ferguson, Covington and Sugg.

- 209-10. Bacteriology.**—Sem. 1 and 2. Rec. 2. Lab. 4.

A study of the pathogenic bacteria, their classification, reproduction, cultural and staining characters, their products and methods of causing diseases.

Assistant Professor Sugg.

- 211. Obstetrics.**—Sem. 1. Rec. 4.

A study of the normal and diseased conditions of domestic animals during pregnancy.

Professor McAdory.

- 301-2. Veterinary Science.**—Sem. 1 and 2. Rec. 2. Lab. 3.

This work is elective for juniors in agriculture. The aim of the work is to teach how to prevent diseases on the farm by proper handling, feeding, working, housing and yarding farm animals. The ways and means of disinfecting, cleaning and keeping animals under proper sanitary conditions are also considered.

Professor McAdory.

- 304. Surgery.**—Sem. 2. Rec. 4.

General and special surgery of domestic animals.

Professor Cary.

- 305-6. Anatomy.**—Sem. 1 and 2. Lab. 8.

The comparative anatomy of the (a) ox; (b) sheep; (c) swine; (d) dog; (e) cat; (f) poultry.

Professor McAdory.

- 307-8. Veterinary Medicine.**—Sem. 1 and 2. Rec. 3.

A study of the internal diseases of (a) cattle; (b) sheep and goats; (c) swine; (d) dog.

Assistant Professor Ferguson.

- 309. Parasites.**—Sem. 1. Rec. 3. Lab. 2.

The course deals with the animal and plant parasites that infest man and animal. The anatomy, classification, modes of life, life history, the mechanical, nutritional and toxic effects on hosts, etc., are studied. Specimens are collected, classified, mounted or preserved.

Professor Cary and Assistant Professor Covington.

- 310. Infectious Diseases.**—Sem. 2. Rec. 3.

A study of the causes, modes of transmission, methods of diagnosis and prevention of infectious diseases of animals.

Assistant Professor Ferguson.

- 312. Shoeing.**—Sem. 2. Rec. 2. Lab. 2.

It consists of a study of normal and pathological shoeing of horses, mules and cattle.

Assistant Professor Covington.

313. Pathology.—Sem. 1. Rec. 3. Lab. 6.

A study of the cellular and inter-cellular changes that occur in the various diseases of animals. Microscopic and macroscopic examinations are made of diseased organs, cells, tissues and liquids.

Assistant Professor Sugg.

315. Clinical Diagnosis.—Sem. 1. Rec. 2. Lab. 2.

The physical and laboratory methods of making a clinical diagnosis of the various diseases of animals.

Assistant Professor Covington.

317-18. Clinics.—Sem. 1 and 2. Lab. 8.

The work consists of examinations, surgical and therapeutical applications of diseased animals in the hospital and at the polyclinic.

Professors Cary, McAdory; Assistant Professors Sugg, Ferguson and Covington.

319. General Bacteriology.—Sem. 1. Rec. 2. Lab. 4.

The subject matter of this course includes an introduction to the principles of bacteriology and is designed to serve as a basis for students contemplating specialization in the applied phases of the subject. The student becomes familiar through laboratory practice with the methods employed in culture and study of bacteria. For students in agriculture, home economics, and home demonstration work.

Assistant Professor Sugg.

401-2. Therapeutics.—Sem. 1 and 2. Rec. 3.

A study of all the materials used in diseases and takes up the action of these materials or drugs in health and in diseases. It also considers the use of drugs in diseases.

Assistant Professor Ferguson.

403-4. Surgery.—Sem. 1. Rec. 3.

Sem. 2. Rec. 2.

The work embraces surgical operations and diseases of the various domestic animals and includes a study of lameness and foot diseases.

Professor Cary.

405-6. Veterinary Medicine.—Sem. 1 and 2. Rec. 3.

A study of the internal diseases of the (a) cat; (b) poultry; (c) rabbits. Second semester covers special pathology and diseases of animals.

Professor Cary and Assistant Professor Ferguson.

408. Surgical Exercises.—Sem. 2. Rec. 1. Lab. 3.

It consists of a series of surgical operations for the purpose of teaching the student the science and the art of surgery.

Professors Cary and McAdory.

409. Meat Inspection.—Sem. 1. Rec. 3. Lab. 2.

A study of the ante-mortem and post-mortem conditions found in healthy and diseased animals. It embraces lectures, textbook work and actual meat inspection in a well built and equipped slaughter house.

Professor Cary; Assistant Professor Covington and Lecturer Winters.

410. Milk Inspection.—Sem. 2. Rec. 3. Lab. 2.

A study of diseases of dairy cattle, filth, bacteria and adulterants of milk; feed, water supply, dairy barns, pens and pastures; dairy cans, buckets, wagons, sterilizers, pasteurizers, milk houses and milkers.

Professor Cary and Assistant Professor Sugg.

411-12. Clinics.—Sem. 1. Lab. 8.

Sem. 2. Lab. 10.

Special and polyclinical cases in surgery, internal medicine, infectious diseases, lameness, etc., are included in this work.

Professors Cary, McAdory; Assistant Professors Ferguson, Sugg and Covington.

413-14. Thesis.—Sem. 1 and 2.

Every senior student develops a thesis upon some veterinary subject, and it must contain some original investigation.

Professors Cary, McAdory; Assistant Professors Sugg, Covington.

COURSES IN OTHER DIVISIONS

Students in Veterinary Medicine take in other departments of the college the courses listed below.

For detailed information see description under other departments in this catalogue.

101-2. General Chemistry.—Sem. 1 and 2. Rec. 3.**105-6. Inorganic and Qualitative Chemistry.**—Sem. 1 and 2.**203. Organic Chemistry.**—Sem. 1. Rec. 3.**204. Physiological Chemistry.**—Sem. 2. Rec. 3.**414. Toxicology and Urinalysis.**—Sem 2. Rec. 1. Lab. 3.**206. Botany.**—Sem. 2. Rec. 2. Lab. 3.**101-2. English.**—Sem. 1 and 2. Rec. 3.**101-2. Judging Live Stock.**—Sem. 1 and 2. Rec. 1. Lab. 2.**406. Breeding.**—Sem. 2. Rec. 2.**201. Dairying.**—Sem. 1. Rec. 1. Lab. 2.**301. Feeding.**—Sem. 1. Rec. 3.**202. Pharmacy.**—Sem. 2. Rec. 2. Lab. 4.**101-2, 201-2. R. O. T. C.**—Sem. 1 and 2. Rec. 1. Lab. 2.**301-2, 401-2. R. O. T. C.**—Sem 1 and 2. Rec. 2. Lab. 3.**101-2—Physical Training.**—Sem. 1 and 2.

REGISTER

MILITARY ORGANIZATION

SESSION 1921-1922

RESERVE OFFICERS' TRAINING CORPS

President

SPRIGHT DOWELL

Commandant and Professor of Military Science and Tactics
MAJOR ISAAC SPALDING, F. A.

Chief of Engineer Unit and Assistant Professor of Military Science and Tactics
CAPTAIN R. D. INGALLS

Chief of F. A. Unit and Assistant Professor of Military Science and Tactics
CAPTAIN L. J. FORTIER, F. A.

Chief of Infantry Unit and Assistant Professor of Military Science and Tactics
CAPTAIN J. M. GROVES, INFANTRY

Supply Officer and Assistant Professor of Military Science and Tactics
CAPTAIN L. J. COMPTON, F. A.

Assistant Professor of Military Science and Tactics
FIRST LIEUTENANT V. A. BEERS, C. E.

Adjutant and Assistant Professor of Military Science and Tactics
FIRST LIEUTENANT R. B. HART, INFANTRY

Instructors of Field Artillery

STAFF SERGEANT GEORGE MOXHAM
SERGEANT RALPH L. EDWARDS
SERGEANT WILLIAM P. WADE
SERGEANT MALCOLM A. CREEK

Instructors of Infantry

FIRST SERGEANT EUGENE D. CALHOUN
SERGEANT CHANDLER P. MILLER

Surgeon

DOCTOR J. H. DRAKE

Regimental Staff

Cadet Colonel W. F. Williams.
Cadet Captain T. W. Coleman, Adjutant.

Regimental Non-Commissioned Staff

Cadet Color Sergeants J. L. Lawson, J. T. Reed.

Engineer Unit

Cadet Major J. O. Jackson.

Cadet First Lieutenant A. R. Harvey, Adjutant.

Cadet Captains

Company "A"

E. L. Beasley

Company "B"

J. M. Hunnicutt

Cadet First Lieutenants

J. F. Holt

J. C. Bailey

G. W. Ward

C. B. Lynch

Cadet Second Lieutenants

A. G. Bennett

V. G. Glover

J. D. Roberson

J. B. Kantor

Cadet First Sergeants

H. C. Floyd

M. P. Robinson

Cadet Sergeants

J. M. Watson

P. Preiss

D. Hays

J. C. Barry

J. K. Bates

F. H. Alley

J. T. Reed

J. E. Davis

F. E. Miller

J. F. Bevis

Cadet Corporals

W. M. Mayson

A. Malone

O. Johnson

C. B. Gamble

A. D. Knapp

F.K.Stockelberg

F. J. Almgren

J. W. Bealle

F. C. Williamson

A. C. Hays

J. C. Hays

A. D. Staples

W. G. Beasley

W. B. Goodwyn

W. T. Snapp

J. G. Jones

Field Artillery Battalion**Battalion Staff Officers**

Cadet Major H. Orr

Cadet Captain D. D. Wendel, Adjutant

Cadet First Lieutenant R. L. Pulley, Communication Officer

Cadet First Lieutenant H. A. Gardner, Reconnaissance Officer

Attached:

Cadet Second Lieutenants M. V. Turner, H. J. Phillips, L. Newman.

Battery "A"	Battery "B"	Battery "C"	Battery "D"
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Cadet Captains

J. D. Lawrence	E. B. Weedon	A. B. Dunwoody	S. M. Boykin
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Cadet First Lieutenants

R. C. Sampley	H. M. Smith	E. D. Cumming	J. H. Kinzer
C. F. Reynolds	J. A. Harrison	J. R. Bradley	C. P. Cook

Cadet Second Lieutenants

H. Stringfellow	R. T. Porter	T. Neely	A. Pow
J. O. Taylor	F. W. Jenkins	C. H. Johnson	J. G. Harlan

Cadet First Sergeants

W. E. DelHomme	L. C. Perry	J. L. McKinnon	Z. Savage
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Cadet Sergeants

M. J. Blackmon	E. E. Todd	C. P. LeSueur	W. J. Carr
J. M. Guthrie	H. J. Creel	B. B. Marsh	E. W. Halfman
C. A. LaCroix	K. H. Stough	P. H. Pfeil	I. P. Johnson
W. K. Upchurch	W. J. Landrum	R. M. Willingham	H. M. Melvin
		C. F. Stallings	J. F. Nettles

Cadet Corporals

E. W. Bartlett	H. O. Halse	J. W. Arnall	R. B. Barnes
J. C. Cannon	E. F. Harlin	E. H. Caldwell	A. M. DeShazo
F. J. Hendley	B. R. Holstun	S. A. Durban	H. F. Gibson
H. C. Howard	R. V. McDonald	C. F. McWilliams	J. L. Harris
A. M. Perdue	D. C. Moore	J. W. Pate	P. L. Andrews
W. D. Thomason	B. K. Naftel	A. R. Stevenson	W. E. Matthews
A. H. Tucker	L. Spencer	W. S. White	
		C. R. Wood	
		R. L. Simpson	

Infantry Battalion**Battalion Staff Officers**

Cadet Major H. G. Spurlock

Cadet First Lieutenant L. B. Sledge, Adjutant

Attached: Second Lieutenants

H. Holstun	R. P. Nicholson	A. L. Welden
F. H. McCarley	J. C. O'Neal	O. D. Yarbrough
D. L. McDavid	G. D. Pollock	J. F. Tribble
H. B. Moses	V. A. Smith	R. B. Draughon
J. T. Straiton	O. E. Waller	

Company "A"	Company "B"	Company "C"
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Cadet Captains

W. T. Mellen	L. E. McMillan	D. W. Robertson
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Cadet First Lieutenants

C. P. Scarbrough	C. H. Snuggs	W. B. Duncan
W. B. Dowell	H. B. Helms	W.H.Henderson

Cadet Second Lieutenants

M. G. Bonner	W. T. Abbott	O. F. Howe
J. M. Argo	T. R. Bethune	J. D. Haynie

Cadet First Sergeants

J. A. McLennan	R. P. Webb	C. H. Lamar
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Cadet Sergeants

G. R. Purifoy	A. B. Long	P. A. Buchanan
R. B. Godwin	J. H. Jackson	C. E. McCartney
C. R. Saunders	J. M. Gillespie	O. B. Farrell
J. H. Ryland	R. F. Boyd	A. L. Hamner
H. G. Williams		H. O. Espy

Cadet Corporals

C. S. Chapman	O. Boaz	L. W. Gardner
W. L. Bross	E. G. Caldwell	L. E. Hereford
H. E. Araiaail	L. M. Chambliss	J. M. Jones
M. Palmer	J. S. Reese	R. B. Mardre
P. N. Davis	W. B. Sims	E. F. Randall
J. R. Gantt	A. G. Stewart	W. A. Ruffin
J. L. Mason	W. L. O'Donnell	J. E. Bridges
M. C. Taylor	W. C. Middleton	L. M. Bickerstaff
L. B. Howell	S. C. Wellborn	M. M. Collins
A. C. Hays		D. R. Smith

THE AUBURN BAND

P. R. Bidez, Bandmaster.

H. D. Jones, Instructor.

J. M. Hunnicutt, Drum Major.

MUSICIANS

Anderson, W. M.	Saxophone	Kelley, A. F.	Baritone
Abbott, W. T.	Trombone	Lasater, M. E.	Horn
Bailey, J. C.	Clarinet	Mandy, W. H.	Trombone
Barry, P. P.	Drums	Mink, H. C.	Horn
Bethune, T. R.	Bass	Middleton, W. C.	Drums
Benson, S. O.	Cornet	Mandy, G. H.	Drums
Carr, W. J.	Cornet	Pollock, G. D.	Cornet
Chambliss, L. M.	Clarinet	Roberts, P. T.	Saxophone
Dennis, J. W.	Trombone	Schaub, A. M.	Saxophone
Festorazzi, A. O.	Bass Drum	Swango, B. H.	Clarinet
Foster, W. W.	Cornet	Stephenson, H. K.	Saxophone
Hale, W. T.	Trombone	Trammell, R. C.	Trombone
Holt, E. A.	Cornet	Swanson, A. R.	Trombone
Hunnicutt, J. M.	Drum Major	Warren, F. D.	Saxophone
Harrison, W. L.	Saxophone	Wood, W. T.	Cornet
Jones, L. D.	Baritone	Willoughby, G. H.	Cornet
Jones, H. D.	Trombone	Staples, A. D.,	Flute & Piccolo
Jordan, J. F.	Clarinet	Brown, R. A.	Horn
Jackson, J. H.	Cornet	Bickerstaff, H. J.	Saxophone
Killgore, E. S.	Clarinet		

CLASS OF 1921

HONORS

Members of the Senior Class who attain distinction with grade of 95 per cent are graduates with Highest Honor. Those who attain a distinction with a grade of 90 per cent and less than 95 are graduates with Honor. Those who attain less than 90 per cent and more than 60 per cent are Graduates.

DEGREES

BACHELOR OF SCIENCE

GRADUATES

Acker, Joe Morris	Chem. Eng.	Gadsden
Barker, Marcus Ralph	General	Auburn
Barker, Wyss Leo	Chem. Eng.	Auburn
Barks, Herbert Barnard	Chem. Eng.	Birmingham
Bartee, Homer Gray	Elec. Eng.	Cordele, Ga.
Biggin, Harold Lyle	Elec. Eng.	Auburn
Bivins, Daniel Eugene, Jr.	Elec. Eng.	Bartow, Fla.
Bradley, Charles Henry	Elec. Eng.	Mobile
Bradley, James Thomas	Agriculture	Blacksher
Brown, John Morgan	Chem. Eng.	Auburn
Brown, Robert Crawford	General	Ensley
Buchanan, James Lake	Elec. Eng.	Riverton
Bullock, John Kavanaugh	Animal Husbandry	Montgomery
Byrd, William Fitzhugh	Agronomy	Birmingham
Caton, Noah Winston	Mech. Eng.	River Falls
Christopher, Ralph Coleman	Animal Husbandry	Isney
Cobb, Lucile Meredith	General	Tuskegee
Cook, Samuel Clarence	Agr. Education	Camden
Copeland, Rodney Hugh	Mech. Eng.	Auburn
Creel, John Paul	Agr. Education	Morris
Croll, Samuel Donovan	Agriculture	Aliceville
Davis, Clifford Gilmore	Civ. Eng.	San Benito, Tex.
Deck, Herman Hoover	Agronomy	Guntersville
DeShazo, Albert Perry	Mech. Eng.	Birmingham
Dowdell, David Merrick, Jr.	Horticulture	Wimauma, Fla.
Drake, Rosa	General	Auburn
Feagin, Joe Daniel	Civ. Eng.	Union Springs
Festorazzi, Angelo Otto	Mech. Eng.	Mobile
Fuller, Melville Gray	Elec. Eng.	Huntsville
Fullwood, Harry Sisson, Jr.	Elec. Eng.	New York, N.Y.
Garland, Peter Joseph	Animal Husbandry	Jones
Garner, Samuel Gideon	Agr. Education	Tuscaloosa
Griggs, Alfred Flournoy	Elec. Eng.	Birmingham
Handley, Levis Wilson	Chem. & Met.	Lineville
Hardeman, Harriet Currie	General	Auburn
Hare, Joseph Crosland	Chem. Eng.	Auburn
Hayley, Arthur Lee, Jr.	Elec. Eng.	America
Hillman, Lyle Jarman	Elec. Eng.	Orrville
Hillman, Robert Charles	Agriculture	Orrville
Hodges, Linnie Pitt	Chem. & Met.	Dothan
Holland, Joseph Alfred	Civ. Eng.	Huntsville
Hollingsworth, William Strother	Agronomy	Edgefield, S. C.
Holstun, Hollis Oswald	General	Camp Hill
House, Ray Walthall	Elec. Eng.	Acmar

Hurlbert, James Daniel	Elec. Eng.	Cuba
Jacobs, Mose	Agr. Education	Birmingham
Jeffrey, Frank Inge	Agronomy	Lower Peach Tree
Johnson, Sidney Walton	Agronomy	Auburn
Johnston, Charles Nathan	Mech. Eng.	Sweetwater
Komp, George Barnes, Jr.	Elec. Eng.	Hattiesburg, Miss.
Lamar, George Glenn	General	Auburn
Lisenby, Amsie Horton	Chem. Eng.	Dothan
Lovin, John Witty	Chem. Eng.	Decatur
Lowman, Pierre Ingram	Mech. Eng.	Orangeburg, S. C.
McFaden, Frank Sidney	Civ. Eng.	Montgomery
McFall, James William	Agr. Education	Anderson, S. C.
Malone, Joseph Wheeler	Animal Husbandry	Birmingham
Maury, James Fontaine, Jr.	Mech. Eng.	Spring Hill
Neel, Oliver W.	Mech. Eng.	Bearden, Ark.
Ollinger, Rodney Matthews	Arch. Eng.	Mobile
Page, Frank Penn	Chem. & Met.	Dothan
Palmer, William	Animal Husbandry	Ackerville
Peterson, Lyman Loomis	Elec. Eng.	Alexander City
Powell, Elwyn Nimmons	Mech. Eng.	Newnan, Ga.
Powell, John Stephen	Civ. Eng.	Newnan, Ga.
Rayfield, Lee Rasberth	Chem. & Met.	Weogufka
Reid, Cyrus Eugene	Elec. Eng.	Montgomery
Riley, William Leonard	Chem. Eng.	Birmingham
Rogers, John Benjamin	Elec. Eng.	Birmingham
Rutledge, Robert Edgar	Chem. Eng.	Ensley
Sartain, Ezra Wilson	Elec. Eng.	Oakman
Seale, Eunice Brooks	Chem. Eng.	Moundville
Simpson, William Gulley, Jr.	Agr. Education	Snow Hill
Small, Ernest Gustave	Animal Husbandry	Minter
Smith, Charles Alstin	Elec. Eng.	Sylacauga
Smith, Charles Linton	Agr. Education	Covin
Speigner, Alex Hillary	Highway Eng.	Dothan
Spoon, LeRoy Page	Elec. Eng.	Charlotte, N. C.
Terry, Edward Allison	Animal Husbandry	Millbrook
Vaiden, James Winchester	Chem. Eng.	Uniontown
Wade, James Dallas, Jr.	Elec. Eng.	Montgomery
Wadkins, Ross Franklin	Agr. Education	Opelika
Ward, Birma Leon	Pharmacy	Dothan
Warren, Chester Clyde	Civ. Eng.	Coal City
Warren, George Butler	Animal Husbandry	Albany
Waugh, John Dayton	Animal Husbandry	Mathews
Whatley, Walter Alexander	Agriculture	Opelika
Whipple, Ulysses Virgil, Jr.	Horticulture	Cordele, Ga.
Wideberg, John Eric	Arch. Eng.	Jamesburg, N. J.
Wilkinson, Ernest Albert	Animal Husbandry	Autaugaville
Youngblood, Robert Wadkins	Agronomy	Dothan

GRADUATES WITH HONOR

Anderson, Charles Carlisle	Agronomy	Prospect
Barnett, Frank Madison	Agronomy	Fitzpatrick
Bell, Almarion Devalco	Agronomy	Alpine
Bell, Franklyn Evelyn	Elec. Eng.	Pensacola, Fla.
Boyd, Alfred DeWitte	Civ. Eng.	Auburn
Bryan, Bert Nathan	Horticulture	Marshallville, Ga.
Cooper, John Francis, Jr.	Animal Husbandry	Echola
Crane, Lawrence Welch	Elec. Eng.	Birmingham
Darby, Edward Fletcher	Mech. Eng.	Birmingham

Dowdell, Madie	General	Auburn
Duboise, Thomas	Agr. Education	Phil Campbell
Dunn, Clyde	Agr. Education	Millport
Easter, Everette C.	Animal Husbandry	Coxey
Greene, Virgil Roy	Agr. Education	Arley
Hahn, Herbert Louis	Mech. Eng.	Birmingham
Hardie, Philip Henry	Mech. Eng.	Birmingham
Keenon, Edgar, Jr.	Mech. Eng.	Ensley
McKinley, John Henry	Animal Husbandry	Demopolis
Miller, George Knox	Elec. Eng.	Monticello, Fla.
O'Neal, James Cornelius	Mech. Eng.	Mobile
Ray, Grover Washington	Agr. Education	Alexander City
Reed, Russell Sage	Elec. Eng.	Altoona
Roberts, Amos Dalton	Agr. Education	Fayette
Shealy, James Wellington	Elec. Eng.	Enterprise
Sizemore, Emmett	Animal Husbandry	Guin
Stevenson, Will Allen	Animal Husbandry	Notasulga
Stokes, Benjamin Boulware, Jr.	Elec. Eng.	Birmingham
Vernon, John	Mech. Eng.	Birmingham
Wade, Allan Jackson	Elec. Eng.	Birmingham
Walker, Marion Newman	Horticulture	Clemson Col., S. C.
Watson, Luther Boardman	Elec. Eng.	Furman
Watts, Edgar Reid	Elec. Eng.	Oakman
Whately, John Louis	Animal Husbandry	Opelika
Wilkinson, Edward Everett	Animal Husbandry	Thomasville
Williams, Homer Eaton	Agr. Education	Waterloo
Williams, Vester Vanderbilt	Animal Husbandry	Guin
Wilson, Samuel Lee	Agr. Education	Double Springs
Winton, William Harmon	Chem. Eng.	Greenville

GRADUATES WITH HIGHEST HONOR

Collins, Albert Hamilton	Agr. Education	Covin
Gottlieb, Jacob	Mech. Eng.	Birmingham

DOCTOR OF VETERINARY MEDICINE

GRADUATES

Burleson, Benjamin Z.	Hackleburg
Holloway, Albert Lee	Monroeville
May, James Warren	Mobile
Tyler, Napoleon Bonaparte	Rich Square, N. C.

GRADUATE WITH HONOR

Patterson, Frederick Davis, Jr.	Cuthbert, Ga.
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GRADUATES IN PHARMACY (Ph. G.)

Andrews, James Glover	LaFayette
Atkins, John Lewis	Heflin
Bruner, Oliver Glenn	Ft. Deposit
Dillon, Hugh Crawford	Birmingham
Megginson, Theodore Jackson	Thomasville
Parker, Phillip Harold	West Point, Ga.
Sandlin, William Woodfin	Moulton
Segrest, Purser George	Notasulga
Taylor, Norris Pelham	Gadsden
Wilson, Grady L.	Troy

POST GRADUATE DEGREES

MASTER OF SCIENCE

Pilcher, James Byrd	Chemistry	Dothan
Stephens, William R.	Chemistry	Texas

MASTER OF SCIENCE IN ARCHITECTURE

Perdue, Marvin Lucian	Birmingham
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PROFESSIONAL DEGREES IN COURSE

CIVIL ENGINEER

Wideberg, Carl Eric	Montgomery
<i>With Highest Honor</i>	

Hanna, Verner Cyril	Auburn
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MECHANICAL ENGINEER

Pearson, Gerald Walstein	Devereaux, Ga.
Watson, Lynn Casey	Birmingham

DEGREES FOR PROFESSIONAL WORK

ELECTRICAL ENGINEER

Smith, Charles Henry	Pittsburg, Pa.
Sparks, Harry Peckham	Pittsburg, Pa.

MECHANICAL ENGINEER

Haynie, Fred Hollis	New York City
Newman, Arthur Bernhart	Peoria, Ill.
Stewart, Chester A.	Parkersburg, W. Va.

DISTINGUISHED STUDENTS

1920-21

A student who receives a grade of 95 per cent or above on the required number of credits is published as having attained Highest Distinction and one who receives between 90 and 95 per cent is published as having attained Distinction, provided the student does not fail in any subject and does not receive an excessive number of demerits.

JUNIOR CLASS

DISTINCTION

Bailey, Julian Clarke	Demopolis
Blalock, James Crow	Florence
Davis, Richard Orrick	Decatur
Dowell, William Burton	Auburn
Gardner, Harmon Austin	Auburn
Hodnette, John Koga	Notasulga
Lawrence, James Driskell	Plantersville
Logan, James Thomas	Rockford
Mead, Daniel Lewis	Selma
Mendenhall, Walker Hamilton	Ensley
Muths, Sherman Louis	Mobile
Orr, Herman	Dothan
Pippin, Robert Roy, Jr.	Ozark
Spratling, Sarah Augusta	Gold Hill
Stewart, Dewey	Winchester, Tenn.
Williams, William Francis	Eutaw

HIGHEST DISTINCTION

Gottlieb, Leon	Birmingham
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SOPHOMORE CLASS

DISTINCTION

Arnall, John Fleming	Senoia, Ga.
Caldwell, Edward Gordon	Tallassee
Caldwell, Elbert Hays	Scottsboro
Clarke, Franklin Ashton	Andalusia
Espy, Herbert Otto	Gordon
Ford, John William, Jr.	Montgomery
Gardner, Louis Wright	Auburn
Hays, Dupree	Mobile
Hereford, Lawrence Edward	Gurley
Jacobs, Edward C.	Selma
Keller, Charles Spurgeon	Hanceville
Knox, Ira Landrith	Chattanooga, Tenn.
Lindsley, John William	Nashville, Tenn.
Lowery, Julius Caesar	Republic
Marsh, Bryan Bell	Yantley
Mayson, Wilmer Monroe	Mobile
Nettles, Jack Finklea	Tunnell Springs
Owen, James Robert	Bessemer
Pearce, James Gibson	Winfield
Savage, Cole	Gordo
Stephenson, Henson Knolen	Selma
Stephenson, James Gordon	Moulton
Tatum, Colonel David	Valley Head
Stough, Kelly Howard	Midland City

Taylor, Murray Clinton	Ashford
Thagard, Thomas Werth	Greenville
West, Harry Irwin	Prescho, S. Dak.
Willingham, Raleigh Manning	Lineville

HIGHEST DISTINCTION

Hunnicutt, James Madison	Birmingham
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FRESHMAN CLASS

DISTINCTION

Andrews, Paul LeGrand	Montgomery
Bates, John William	Mobile
Benning, Augustus Harrison	Atlanta, Ga.
Brock, Leland Grace	Melborne
Collins, Milton Massey	Ozark
Cooper, William Creed	Atlanta, Ga.
Fowler, Henry Eugene	Uniontown
Gamble, Cary Breckenridge	Huntsville
Horn, Newton Yeager	Montevallo
Howard, Percy Harry	Carbon Hill
Johnson, James Thoreau	Meltonsville
Kling, August John	Mobile
Knowles, Hugo Shaler	Montgomery
Lutz, Earle Guthrie	Montgomery
Nunn, Robert Alexander	Loachapoka
Palmer, Martin	Carson
Pate, William Wesley	Paul
Price, Val	Floral
Semmes, Oliver John	Pensacola, Fla.
Swango, Beverly Holmes	Birmingham
Tapscott, Leldon Hunter	Falkville
Trum, Alexander David	Montgomery
Wiatt, John Edward, Jr.	Auburn

HIGHEST DISTINCTION

Timberlake, Philip Samuel	Stevenson
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DISTINCTION

Dyer, Luther Thomas	Malone
Jenkins, Ulysses Clanton	Corona

HIGHEST DISTINCTION

Morris, William Chester	Tuscumbia
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CATALOGUE OF STUDENTS

SESSION 1921-22

GRADUATE STUDENTS

Blasingame, Helen L.	General	Auburn
Burns, Francis William	Animal Husbandry	Auburn
Caton, Noah Winston	General	River Falls
Easter, Everette C.	Agriculture	Coxey
Festorazzi, Angelo Otto	Mech. Eng.	Mobile
Fortier, Louis Joseph	Civ. Eng.	Auburn
Gardner, Junius Roach	General	Birmingham
Garland, Peter Joseph	General	Mentone
Hardeman, Harriet Currie	General	Auburn
Lauderdale, Arthur Armon	Animal Husbandry	Auburn
McLeod, Norman Burns	General	Auburn
Ollinger, Rodney Matthews	Arch. Eng.	Mobile
Randolph, John W.	Agriculture	Auburn
Tidmore, James Wallace	Agriculture	Moundville

SENIOR CLASS

Abbott, William Thomas	Chem. Eng.	Birmingham
Adams, David Clopton	Elec. Eng.	Albany
Adams, Samuel Henderson	Pharmacy	Dothan
Allen, James Harvey	Mech. Eng.	Anniston
Anderson, Samuel Porter	Agriculture	Tuscumbia
Appleton, Wesley Howard	Agriculture	Collinsville
Bailey, Julian Clarke	Elec. Eng.	Demopolis
Banks, John Coleman	Agriculture	Eutaw
Barlow, William Wallace	Vet. Med.	Cochran, Ga.
Basore, Lucien Kellog	Chem. & Met.	Birmingham
Beasley, Elliott Laney	Civ. Eng.	Jacksonville, Fla.
Bennett, Aubrey Graham	Elec. Eng.	Auburn
Blalock, James Crow	Elec. Eng.	Florence
Bonner, Moffatt Grier	Agriculture	Oak Hill
Boriss, Julian Ivandale	Civ. Eng.	Birmingham
Boykin, Samuel Marks	Mech. Eng.	Mobile
Bradley, John Robert	Architecture	Century, Fla.
Breedlove, Frederick Wallace	Elec. Eng.	New Orleans, La.
Brown, David	Civ. Eng.	Pratt City
Burton, Thomas Henry	Chem. & Met.	Oxford
Camp, Norman Glenn	Elec. Eng.	Senoia, Ga.
Cannon, Naham Allen	Architecture	Birmingham
Chandler, Edward Montgomery	Chem. & Met.	Birmingham
Childree, Linney Leonidas	Civil Eng.	Midland City
Cobb, Marion Clifton	Mech. Eng.	Geiger
Coleman, Thomas Wilkes	Mech. Eng.	Anniston
Cook, Curtis Preston	Agriculture	Lisman
Cooper, Robert James	Elec. Eng.	Auburn
Covington, C. R.	Vet. Med.	Mayfield, Ky.
Cumming, Edwin Davis	Chem. Eng.	Louisville
Davis, Ennis Augustus	Vet. Med.	Thomasville, Ga.
Davis, Edmond Pearce	Mech. Eng.	Oak Grove
Davis, Richard Orrick	Civ. Eng.	Decatur
Denson, Leonidas Lycurgus	Vet. Med.	Bay Springs, Miss.
Dickinson, Jackson Miller	Elec. Eng.	Billingsley
Dowell, William Burton	General	Auburn

Draughon, Ralph Brown	General	Geneva
Duncan, Wilton Burton	Elec. Eng.	Athens
Dunwoody, Archibald Bullock	Mech. Eng.	Atlanta, Ga.
Edge, Harvey Arnold	Agriculture	Buffalo
Everett, Edward	Vet. Med.	Mendenhall, Miss.
Funderburg, Claud Hawkins	Elec. Eng.	Birmingham
Gardner, Harmon Austin	Agriculture	Auburn
Glover, Vernon Joseph	Elec. Eng.	Quinton
Gottlieb, Leon	Civ. Eng.	Birmingham
Gulledge, Euclid Taylor	Agriculture	Tallassee
Haggard, Richard Lester	Agr. Education	Gadsden
Harlan, John Gilbert	General	Alexander City
Harrison, James Alex	Elec. Eng.	Birmingham
Harvey, Addison Reese, Jr.	Civ. Eng.	Montgomery
Hatchett, Benjamin Franklin	Elec. Eng.	Athens
Hawk, George Morton	Agr. Education	Nicholsville
Haynie, Jack Duke	Agriculture	Auburn
Helms, Harlie Bee	Agriculture	Elba
Henderson, William Hobart	Chem. Eng.	Birmingham
Hodnette, John Koga	Mech. Eng.	Notasulga
Hollingsworth, Lawrence Melton	Agr. Education	Jacksonville
Holstun, Harvey	Elec. Eng.	Waverly
Holt, James Fannin	Elec. Eng.	Montgomery
Howe, Orlando Fox	Agriculture	Montgomery
Hunnicut, James Madison	Civ. Eng.	Birmingham
Ingle, James Hubbert	Agriculture	Nauvoo
Jackson, Albert Clay	Chem. Eng.	Birmingham
Jackson, John O'Connell	Mech. Eng.	Montgomery
Jenkins, Fred Wesley	Elec. Eng.	Verbena
Jennings, Alton Claud	General	Langdale
Johnson, Charles Hanson	Mech. Eng.	Camp Hill
Kantor, Joseph Benjamin	Chem. Eng.	Birmingham
Keith, Frederick Rulfs	Agriculture	Currie, N. C.
Keller, Charles Spurgeon	Agr. Education	Hanceville
Kinzer, James Hanlin	Elec. Eng.	Sheffield
Kirkwood, John Kenneth	Agr. Education	Parrish
Lasater, Marion Earl	Mech. Eng.	Bridgeport
Lawrence, James Driskell	Agriculture	Plantersville
Logan, James Thomas	Elec. Eng.	Rockford
Looney, John Burrow	Elec. Eng.	Winchester, Tenn.
Lynch, Charles Byrne	Elec. Eng.	Montgomery
McCarley, Frank Hollingsworth	Elec. Eng.	Buffalo
McCartha, Charles B.	Vet. Med.	Tallassee
McDavid, David Lanier	Elec. Eng.	Atmore
McGinty, Robert Heard	Agriculture	Camp Hill
McIlvaine, Victor Caryl	Elec. Eng.	Tampa, Fla.
McMillan, Lauchlin Emerson	Civ. Eng.	Inverness
Mellen, William Tartt	Mech. Eng.	Livingston
Melton, Henry Dallas	Agr. Education	Dothan
Mendenhall, Walker Hamilton	Elec. Eng.	Ensley
Miller, Arthur Augustus	Vet. Med.	Nanafalia
Miller, Jesse Lokey	Vet. Med.	Columbus, Ga.
Mobley, Steven Douglas	Elec. Eng.	Columbus, Ga.
Montgomery, Robert Charles	Civ. Eng.	Warrior
Morrow, Samuel Lundy	Agriculture	Somerville
Muths, George Alwyn, Jr.	Elec. Eng.	Mobile
Muths, Sherman Lewis	Elec. Eng.	Mobile
Neely, Thomas	Elec. Eng.	Demopolis
Neighbors, Hugh Anderson	Vet. Medicine	Goodwater

Nesbit, Arthur P'Pool	Elec. Eng.	Decatur
Newman, Leslie	General	Opelika
Nicholson, Rufus Percy	Pharmacy	Collinsville
O'Donnell, Claude Wainwright	Civ. Eng.	Sanford, Miss.
Ordway, Charles Boutelle	Chem. & Met.	Murfreesboro, Tenn.
Orr, Herman	Civ. Eng.	Dothan
Osborn, Fred Wood	Elec. Eng.	Birmingham
Phillips, Henry Jones	Elec. Eng.	Lisman
Pippin, Robert Roy	Agr. Education	Ozark
Pollock, George Dean, Jr.	Elec. Eng.	Birmingham
Porter, Roy Thomas	Elec. Eng.	Hillsboro
Pow, Adam	Civ. Eng.	Birmingham
Proctor, W. Bryan	Agr. Education	Scottsboro
Pulley, Robert Lackey	Elec. Eng.	Huntsville
Reagan, Frank Alexander	Vet. Med.	Delta
Reese, George Wright	Elec. Eng.	Pensacola, Fla.
Reynolds, Charles Frederick	Elec. Eng.	Clopton
Reynolds, Cedric S.	General	Greenville
Roberson, James Dee	Elec. Eng.	Haleyville
Robertson, Dickson Wharton	Elec. Eng.	Birmingham
Robinson, James Paul	Agr. Education	Gilbertown
Rose, Crawford Allen	Agriculture	Erath, La.
Sampley, Roy Chesler	Elec. Eng.	Dublin, Ga.
Satterfield, Reuben Major	Agr. Education	Ashland
Saunders, Alex Marion	General	Pensacola, Fla.
Savage, Cole	Agriculture	Auburn
Scarborough, Charles Phillip	Elec. Eng.	LaFayette
Scott, Charles	Chem. & Met.	Auburn
Sherling, Edward Creech	General	Greenville
Shirey, John Brett	Mech. Eng.	Guin
Sizemore, Troy Blanch	Mech. Eng.	Guin
Sledge, Leonidas Bryan	Elec. Eng.	Greensboro
Smith, Hester Moore	Civ. Eng.	Birmingham
Smith, Robbie	General	Auburn
Smith, Versie Aubrey	Elec. Eng.	Alexander City
Smith, Virgil Alfred	Mech. Eng.	Slocomb
Snuggs, Charles Hiram	Elec. Eng.	Roanoke
Spratling, Sarah Augusta	Agriculture	Gold Hill
Spurlock, Hugh Griffith	Elec. Eng.	Eufaula
Stewart, Dewey	Agriculture	Winchester, Tenn.
Stewart, Robert Hyman	Vet. Med.	Caesar, Miss.
Straiton, John Tarry	Mech. Eng.	Greensboro
Stringfellow, Harry	Civ. Eng.	White Bluff, Tenn.
Tamplin, Virgil Cline	Agr. Education	Auburn
Tatum, Colonel David	Agr. Education	Valley Head
Taylor, John Osman	Elec. Eng.	Auburn
Taylor, Robert Emmett	Elec. Eng.	Auburn
Thigpen, James Andrew	Agriculture	Auburn
Till, Samuel Brightman	Vet. Med.	Macedonia
Trapp, John Herman	Chem. Eng.	Auburn
Trawick, Zachary Taylor	General	Opelika
Tribble, John Furman	Civ. Eng.	Dora
Turner, Morton Victor	Elec. Eng.	Quitman, Ga.
Turnipseed, George Thomas	Vet. Med.	Fitzpatrick
Waller, Otis Eugene	Agr. Education	Auburn
Ward, George Washington	Civ. Eng.	Pine Apple
Watkins, Harry Wilfred	Civ. Eng.	Birmingham
Weedon, Edward Beall	Elec. Eng.	Eufaula

Welden, Arthur Luna	Chem. & Met.	Titus
Wendel, David Deaderick	Elec. Eng.	Murfreesboro, Tenn.
West, Harry Irwin	Agr. Education	Auburn
Wilder, Leonadus Virgil	General	Birmingham
Williams, Obadiah Dumas	Elec. Eng.	Pine Apple
Williams, William Francis	Civ. Eng.	Pine Apple
Wilson, Earle Frederick	Mech. Eng.	Brewton
Witham, Hamlin Varney	Civ. Eng.	Auburn
Wright, John Peavy	General	Auburn
Zuber, Charles Hodges	Elec. Eng.	Auburn

JUNIOR CLASS

Albritton, James Thomas	Agriculture	Hartford
Allen, Thomas Walton, Jr.	Agriculture	Cromwell
Alley, Frank Hayne	Civ. Eng.	Macon, Ga.
Arnall, John Fleming	Civ. Eng.	Senoia, Ga.
Arnall, James Wiley	Agriculture	Senoia, Ga.
Baird, James John	Architecture	Bessemer
Barnes, Metellus Ard	Chem. Eng.	Ozark
Barnes, Reid Boylston, Jr.	General	Opelika
Barry, James Coyles	Elec. Eng.	Mobile
Bartlett, Elmer Weaver	Elec. Eng.	Lineville
Bates, Josiah Kilgore	Elec. Eng.	Greenville, S. C.
Belcher, William Stansel	Elec. Eng.	Largo, Fla.
Belyeu, John Paul	Elec. Eng.	Alexander City
Benning, Augustus H.	Civ. Eng.	Atlanta, Ga.
Berry, John William	Vet. Med.	Red Bay
Bethune, Richard Frederick	Elec. Eng.	Lumberton, N. C.
Bethune, Thomas Reese	General	Pavo, Ga.
Bevis, James Frank	Elec. Eng.	Roanoke
Bickerstaff, Hugh J.	Pre Medical	Columbus, Ga.
Blackmon, Marshall J.	Elec. Eng.	Columbus, Ga.
Blair, William Robert	Chem. Eng.	Birmingham
Boaz, Oliver	Elec. Eng.	Childersburg
Boyd, Ralph Franklin	General	Livingston
Brackin, Rufus Foy	Agriculture	Headland
Bridges, James Ernest	Agr. Education	Notasulga
Brownell, Harold Spencer	Elec. Eng.	Birmingham
Bryan, James Monroe	Vet. Med.	Auburn
Buchanan, Claude N.	Agriculture	Riverton
Butler, William Oscar, Jr.	General	Chipley, Fla.
Caldwell, Edward Gordon	Agr. Education	Tallassee
Caldwell, Elbert Hays	Agriculture	Scottsboro
Cannon, James Clifton	Agr. Education	Marbury
Carr, William Jolley	Elec. Eng.	Montgomery
Carter, Thomas Otto	Mech. Eng.	Birmingham
Castleberry, Watkins Batt	Vet. Med.	Castleberry
Chambliss, Lauren Morgan	Elec. Eng.	Montgomery
Chapman, Charles Stephen	Elec. Eng.	Grove Hill
Conner, Adolph Allen	Civ. Eng.	Montgomery
Creel, Homer Jackson	Civ. Eng.	Haig
Crockett, Huel Lloyd	Architecture	Girard
Cross, Robert Kernachan	Civ. Eng.	Cherokee
Cunningham, James Ashby	Elec. Eng.	Linden
Davis, John Elliott	Civ. Eng.	Bessemer
Davis, Pleasber Newton	Agr. Education	Dadeville
DelHomme, William Edward	Elec. Eng.	Mobile
DeShazo, Albert Malcolm	Elec. Eng.	Birmingham
Dowell, Camille	General	Auburn

Duckworth, James Vardaman	Vet. Med.	Mendenhall, Miss.
Dumas, Robert Tipton	Agriculture	Mobile
Durban, Sebastian Anthony	Chem. Eng.	Nashville, Tenn.
Espy, Herbert Otto	Civ. Eng.	Gordon
Farrell, Oscar Beauchamp	Agriculture	Catherine
Fleming, William Yancey	Agr. Education	Opelika
Floyd, Harold Cobb	Civ. Eng.	LaGrange, Ga.
Floyd, Kate	General	Auburn
Foster, William Ware	Elec. Eng.	Montgomery
Gamble, Cary Breckenridge	Elec. Eng.	Huntsville
Gantt, James Roy	General	Deatsville
Gardner, Louise Wright	Elec. Eng.	Auburn
Gibson, Homer Franklin	Agr. Education	Hartselle
Gillespie, Judson Marvin	Elec. Eng.	Gallion
Godwin, Rufus Branwell	Agriculture	Americus, Ga.
Grisham, William Peal	Agr. Education	Athens
Guthrie, Joe Martin	Mech. Eng.	Inverness
Hale, William Thurber	Mech. Eng.	Akeley, Pa.
Halfman, Emmett William	Elec. Eng.	Montgomery
Halse, Harvey Osborn	Pharmacy	Montgomery
Hamner, Arthur Lee	Agriculture	Gordo
Hardeman, Harry Hillard	Civ. Eng.	Minden, La.
Harkins, Curtis Ivey	Vet. Med.	Sycamore
Harlin, Edgar Franklin	Agr. Education	Roanoke
Harris, George Leo	Agr. Education	Grady
Hays, Arthur Clairborn	Elec. Eng.	Hartselle
Hays, Dupree	Civ. Eng.	Mobile
Hays, John Cecil	Civ. Eng.	Hartselle
Hendley, Flavius Joseph	Elec. Eng.	Livingston
Hereford, Lawrence Edward	Agriculture	Gurley
Hoffman, Warren Speigner	Chem. & Met.	Waverly
Holstun, Beverly Reid	Agriculture	Waverly
Howard, Hall Caldwell	Civ. Eng.	Carbon Hill
Hunt, James K.	Chem. Eng.	Auburn
Hurt, James William	General	Marion
Ingle, Erastus Winom	Agriculture	Oneonta
Jackson, Julian Harold	Chem. Eng.	Largo, Fla.
Jacob, Edward Clare	Civ. Eng.	Selma
Jervis, Richard Albert	Elec. Eng.	Albany
Johnson, Ingram Purser	Agriculture	Sweetwater
Johnson, Oren	Mech. Eng.	Pike Road
Jones, Joseph Middleton	Agriculture	New Market
Knapp, Albert Dudley	Elec. Eng.	Auburn
Keller, Charles Spurgeon	Agr. Education	Hanceville
Knowles, Frank Alexander	General	Birmingham
Knox, Ira Landrith	Agriculture	Chattanooga, Tenn.
LaCroix, Charles Adolphus, Jr.	Mech. Eng.	Birmingham
Lamar, Charles Hunt	Elec. Eng.	Tuskegee
Landrum, William Judson	Mech. Eng.	Vredenburgh
Lane, Colquitt H.	Architecture	Auburn
Lawson, James Levi	Agr. Education	Banks
Lee, Robert Ernest	Elec. Eng.	Evergreen
LeSueur, Clarence Preston	Civ. Eng.	Waverly
Livingston, Claire Weaver	Home Economics	Leesburg
Long, Andrew Bismarck, Jr.	Chem. & Met.	Greenville
Lowery, Julius Caesar	Agr. Education	Cullman
McCain, Gladys	Home Demonstration	Lineville
McCall, William Charles	Pharmacy	Havana, Cuba

McCartney, Charles Eugene	Elec. Eng.	Ft. Payne
McDonald, Robert Vincent	Elec. Eng.	Mobile
McKinnon, James Lendsey	Civ. Eng.	Talladega Springs
McLennan, James Alan	Mech. Eng.	Decatur, Ga.
McWilliams, Clayton Floyd	Mech. Eng.	Cuthbert, Ga.
Maddox, William Notley, Jr.	Mech. Eng.	Birmingham
Malone, Andrew	Elec. Eng.	Ensley
Mandy, William Henry	Mech. Eng.	Ensley
Mardre, Robert Burton	General	Auburn
Marsh, Bryan Bell	Elec. Eng.	Yantley
Mason, Hibbard Livingston	General	Evergreen
Mayson, Wilmer Monroe	Mech. Eng.	Mobile
Melvin, Herbert Marshall	Agriculture	Eutaw
Middleton, Walter Conyngton	Elec. Eng.	Birmingham
Miller, Fletcher Edward	Civ. Eng.	Floral
Moore, Dewey Columbus	Agriculture	Andalusia
Moses, Henry Benton	Applied Elec.	Girard
Muckenfuss, Charles Henry	Civ. Eng.	Aiken, S. C.
Naftel, Bolling King	Elec. Eng.	Naftel
Nail, James Clyde	Civ. Eng.	Dolomite
Nettles, Jack Finklea	Elec. Eng.	Tunnel Springs
Norwood, Sidney Lawson	General	Birmingham
O'Donnell, Waldrop Lavert	Mech. Eng.	Sanford, Miss.
O'Neal, James Clanton	Chem. & Met.	Andalusia
Orr, James Lee	Vet. Med.	Waverly
Owen, James Robert	Agriculture	Bessemer
Pate, John William	Agr. Education	Blountsville
Patterson, Anita	General	Decatur, Tex.
Pearce, James Gibson	Elec. Eng.	Winfield
Perdue, Albert Monroe	Elec. Eng.	Elba
Perry, Lee Colquitt	Arch. Eng.	Newnan, Ga.
Pfeil, Theodore Henry	Agriculture	Gadsden
Pistole, William Melvin	Agriculture	Mobile
Plant, Wilella	Architecture	Opelika
Preiss, Phil	Mech. Eng.	Montgomery
Price, Thomas Willets	General	Chattanooga, Tenn.
Pritchett, Will Tom	Agr. Education	Inverness
Purifoy, George Richard	Elec. Eng.	Brewton
Randall, Ernest Franklin	Agr. Education	Marion Junction
Ray, Willis Morton	Vet. Med.	Alexander City
Reagan, John M.	Agriculture	Delta
Reaves, Raymond Mayberry	Agriculture	Montevallo
Reece, James Stillman	Mech. Eng.	Gordo
Reed, John Thompson	Civ. Eng.	Washington, D. C.
Richardson, Jewett Edward	General	Montgomery
Riley, Clayton Wesley	Architecture	Tuskegee
Roberson, James Rex	Agr. Education	Haleyville
Roberts, Andrew Jack	Elec. Eng.	Wadley
Robinson, Merritt Patrick	Elec. Eng.	Montgomery
Ruffin, Winford Audry	Agriculture	Deatsville
Russell, Roy Otis	Agriculture	Hartselle
Ryland, Joseph Henry	Vet. Med.	Drewry
Saunders, Charles Richard	Chem. Eng.	Pensacola, Fla.
Savage, Zack	Agriculture	Gordo
Sharpley, Lilian	General	Birmingham
Shaver, Ross Otis	Agriculture	Florence
Shealy, Alexander Nathaniel	Elec. Eng.	Perry, S. C.
Simmons, William Clevie	Vet. Med.	Louin, Miss.

Simmons, William Ellis	Agriculture	Auburn
Sims, William Bartow	Elec. Eng.	Grand Bay
Smith, D. R.	General	Clio, S. C.
Stallings, Crofford Freeman	Mech. Eng.	Newnan, Ga.
Stallworth, Emmett Lee, Jr.	General	Evergreen
Staples, Alexander Dewey	Chem. Eng.	Birmingham
Staples, Johnson Heflin	Vet. Med.	Goodwater
Stephenson, Henson Knowlen	Civ. Eng.	Selma
Stephenson, James Gordon	Elec. Eng.	Moulton
Stevenson, Adlai Ross	Elec. Eng.	Notasulga
Stewart, Albert Graham	Architecture	Greenville
Stewart, Frank McLean	Agriculture	Montgomery
Stough, Kelly Howard	Elec. Eng.	Midland City
Stutts, Dewey William	Mech. Eng.	Florence
Sullivan, Laten Ray	Vet. Med.	Boaz
Tatum, Ruth Zuber	General	Auburn
Taylor, Murray Clinton	Elec. Eng.	Ashford
Thomason, William Douglas	Agriculture	Mobile
Tidmore, David Borden	Chem. Eng.	Moundville
Todd, Edward Eugene, Jr.	Elec. Eng.	Riderwood
Tucker, Arthur Hall	Elec. Eng.	Thomasville
Turnipseed, Samuel Guy	Agriculture	Mathews
Upchurch, William Kendrick	Civ. Eng.	Montgomery
Waller, Henry Lorenza	General	Auburn
Warren, Felix Dewey	Mech. Eng.	Albany
Watson, Joseph Marion	Agriculture	Pensacola, Fla.
Watson, William Boswell	Civ. Eng.	Lakeland, Fla.
Webb, Ralph Powe	General	Birmingham
Wellborn, Samuel Calvin	Architecture	Union Springs
West, Alfred Thurber	Civ. Eng.	Birmingham
White, William Stenhouse	Agr. Education	Marbury
Whitlock, William Parker	Agriculture	Sheffield
Whitson, Maria Rogan	Elec. Eng.	Talladega
Wilkes, George Byron, Jr.	Civ. Eng.	Cordele, Ga.
Williams, Horace Greeley	Elec. Eng.	Seale
Williamson, Fred Carr	Mech. Eng.	Birmingham
Willingham, Raleigh Manning	Agriculture	Roanoke
Wood, Carl Richard	Agr. Education	Phil Campbell
Wright, Cassius Marcus	Chem. Eng.	Bloomfield, N. J.
Zuber, Otis Zachry	General	Auburn

SOPHOMORE CLASS

Adkins, Theodore Roosevelt	Agriculture	Vienna, Ga.
Anderson, Dorothy	General	Newbern
Adams, William Roger	General	Ozark
Alexander, Shirley Fairfax	Chem. & Met.	Prattville
Allen, Leland Norcross	Agriculture	Knoxville, Tenn.
Allen, Roland Allison	Mech. Eng.	Ward
Almgren, Fred Justin	Mech. Eng.	Fairfield
Andrews, Paul LeGrand	Civ. Eng.	Montgomery
Armstrong, Frances Kimbell	General	Auburn
Baird, Albert Clark	Pre-Medical	Columbus, Ga.
Bandy, James Wilson, Jr.	Pre-Medical	Montevallo
Barry, Paul Pruitt	Pre-Medical	Montgomery
Basore, John William	Mech. Eng.	Birmingham
Bates, Bascom Anquest	Civ. Eng.	Montgomery
Bates, John William	Elec. Eng.	Mobile
Bealle, James William	Civ. Eng.	Greenwood, Miss.

Beasley, Walter Gordon	Civ. Eng.	Sansom
Bell, Bernard Chesley	Chem. Eng.	Lineville
Benton, Thomas Hill	Agriculture	Amarillo, Tex.
Berlin, Israel Lionel	Elec. Eng.	West Blocton
Bird, Edwin Bruce	Agriculture	Auburn
Bostick, William Hollis	Agr. Education	Guin
Boyd, Clary Paul	Agriculture	Auburn
Brewer, Willard Winons	Elec. Eng.	Montgomery
Brice, Ralph Gordon	Arch. Eng.	Charlotte, N. C.
Brown, Hal Rodolphus	Mech. Eng.	Sulligent
Browne, James Marvin	Elec. Eng.	Auburn
Brown, Julian	Agriculture	Yantley
Brown, William Phillip	General	Auburn
Cammack, Ralph Waldo	Agr. Education	Grove Hill
Camp, Le Roy	Mech. Eng.	Birmingham
Cannon, Charles Louis	General	Birmingham
Canterbury, Alfred Kirkling	General	Linden
Carper, Charles Elliott, Jr.	Applied Elec.	Birmingham
Chambers, Ernest Howell	Elec. Eng.	Albertville
Chambliss, Lambert Alexander	Mech. Eng.	Prattville
Chapman, Wheeler Edwards	Civ. Eng.	Enterprise
Cobb, Howard	Elec. Eng.	Carbon Hill
Collins, Milton Massey	Elec. Eng.	Ozark
Cone, Aaron Asberry	Agr. Education	Hubert, Ga.
Cooke, Herbert Earl	Agriculture	Auburn
Cox, Preston Arthur	Agr. Education	Hamilton
Crane, Theodore Poole	Elec. Eng.	Birmingham
Creel, Annie B.	General	Haig
Creel, Eugene Mathews	Agr. Education	Warrior
Cross, Charles Preston	Pre-Medical	Bessemer
Cross, John Storrs	Elec. Eng.	Birmingham
Crow, Ross Liston	Agr. Education	Jacksonville
Curtis, Harry	Elec. Eng.	Auburn
Davis, John McIntosh Kell	High. Eng.	Griffin, Ga.
Davis, James Raymond	Chem. Eng.	Piedmont
DeLoach, Byron Everette	General	Buffalo
Dennis, Jephtha Weldon	Pre-Medical	Montgomery
DeRamus, Thomas Barnett	Mech. Eng.	Verbena
Dickinson, Robert Charles	Elec. Eng.	Brundidge
Diffie, James Marsh	Elec. Eng.	Cordele, Ga.
Douglas, Garvey Dixon	Mech. Eng.	Cordova
Dowdell, William Oliver	Pharmacy	Auburn
Dowdy, Rufus Brown	Mech. Eng.	Florence
Dowe, Thornton Gregory	Elec. Eng.	Montgomery
Duke, Andrew Jesse	General	Birmingham
Durr, Eddie Harry	Vet. Med.	Brookhaven, Miss.
Earnest, Chloe Pauline	General	Auburn
Edwards, Evans Lavert	Elec. Eng.	Clanton
Edwards, Lloyd Bonwell	Elec. Eng.	Sylacauga
Elliott, Welch Brantley	Civ. Eng.	Leeds
Esdale, Charles Chester	Chem. Eng.	Birmingham
Ford, Ross Vexton	Agr. Education	Hamilton
Foreman, Clyde Wesley	General	Mobile
Fowler, Henry Eugene	Agriculture	Uniontown
Fulton, Adelbert Graham	Agriculture	Dadeville
Galbreath, Henderson E.	Vet. Med.	Union Church
Gibson, Charles Griffin	Elec. Eng.	LaGrange, Ga.

Goleman, Albert Sidney	Architecture	Whistler
Goodwyn, William Bibb	High. Eng.	Montgomery
Greenhill, James Ira	Mech. Eng.	Pratt City
Griffin, Davis Whatley	Vet. Med.	Birmingham
Grimley, Kenneth William	Civ. Eng.	Fairhope
Guy, William Vinson	Elec. Eng.	Montgomery
Hagerman, Osie Saxon	General	Opelika
Hahn, Frederick Carl	General	Birmingham
Hall, Lester House	Agriculture	Montgomery
Hanlin, Frank Kirby	Elec. Eng.	Sheffield
Harbour, Clarence Glen	Pre-Medical	Piedmont
Hardy, Miles, Jr.	Agriculture	Tyler
Harris, Russell Clemons	Mech. Eng.	Cordele, Ga.
Harrison, John Casey	Agriculture	Selma
Harrison, Joseph Lawrence	Elec. Eng.	Montgomery
Harvey, Jesse Ester	Agr. Education	Rogersville
Hawkins, Joseph Ray	Agriculture	Midland City
Hawkins, William Burgin	General	Birmingham
Heath, William Preston	Elec. Eng.	Opelika
Hetzler, Robert Glenn	Mech. Eng.	Chattanooga, Tenn.
Holman, Frank Louis	Elec. Eng.	York
Holman, Henderson Looney	Elec. Eng.	Ozark
Holt, Elbert Augustus, Jr.	Architecture	Montgomery
Hooker, Joseph Earle	Agriculture	Auburn
Horne, John	Mech. Eng.	Ensley
Horn, Newton Yeager	Elec. Eng.	Montevallo
Housel, Leslie Raymond	Elec. Eng.	Lathrop
Howard, Percy Harry	Civ. Eng.	Carbon Hill
Howell, Lucius B.	Arch. Eng.	Marion
Huey, George Whitfield	Agr. Education	Wedowee
Johnson, Joseph Thoreau	Elec. Eng.	Meltonville
Johnson, Forrest Joseph	General	Pascagoula, Miss.
Johnson, Oattie Prather	Elec. Eng.	Americus, Ga.
Jones, Herman D.	Chem. Eng.	Dothan
Jones, James Gordon, Jr.	Elec. Eng.	Cordele, Ga.
Keller, George Morrison	Chem. Eng.	Birmingham
Killough, William Graham	Agr. Education	Honoraville
Kling, August John	Elec. Eng.	Mobile
Leath, Alonzo Sylvester	Agriculture	Auburn
LeBron, Otto K.	Mech. Eng.	Wetumpka
Lee, Edward Tarrant	Agriculture	Marion
Lee, Herbert Anthony	Arch. Eng.	Luverne
Leonard, Charles Edmund	Agriculture	Birmingham
Levie, Archie Wood	Mech. Eng.	Goodwater
Levy, Edward Jefferson	Elec. Eng.	Girard
Livingston, Bernice Pritchett	Agr. Education	Leesburg
Lockhart, Charles B.	Civ. Eng.	Marion
Lutz, Earle Guthrie, Jr.	Architecture	Montgomery
McCarley, Thomas Carl	Agr. Education	Lamar
McCutcheon, Walker Ponder	Elec. Eng.	Birmingham
McLain, Crawford Eugene	Pre-Medical	Miami, Fla.
Manley, George Edward	Mech. Eng.	Birmingham
Matthews, William Elliott	Elec. Eng.	Montgomery
Mellen, Henry Levi	General	Livingston
Miller, Henry Knox	Elec. Eng.	Monticello, Fla.
Morris, Frank Howard	Mech. Eng.	Talladega
Morris, Jessie Edwin	Agr. Education	Talladega
Morris, Raymond Henry	Chem. & Met.	Statesboro, Ga.

Morris, William Chester	Civ. Eng.	Tuscumbia
Mosley, John Erskine	Elec. Eng.	Lockhart
Mosley, William Kelly	Elec. Eng.	Pensacola, Fla.
Moulton, Edward Russell	Mech. Eng.	Mobile
Nelson, Thomas Neil	Agr. Education	Columbiana
Newman, Henry Floyd	Elec. Eng.	LaFayette
Newton, Wesley Carl	Elec. Eng.	Dothan
Nunn, Robert Alexander	Agr. Education	Loachapoka
Orr, Frank M., Jr.	Arch. Eng.	LaGrange, Ga.
Owen, Willis Lawton	Agriculture	Ashland
Palmer, Martin	Agr. Education	Carson
Parks, Leon Hayne	Mech. Eng.	Fayetteville
Pate, William Wesley	Agr. Education	Paul
Patrick, Irving	Agr. Education	Vinemont
Peniston, Thomas Jackson	General	Newnan, Ga.
Phillips, Andrew Thomas	Mech. Eng.	Lexington
Phillips, George Wendell	Civ. Eng.	Eupora, Miss.
Pippin, James Wyatt	General	Ozark
Powe, Robert McKee	Mech. Eng.	Silas
Price, Val	Elec. Eng.	Florala
Pruitt, Clyde Augustus	Agr. Education	Pine Hill
Ramsay, Andrew Elias	Agr. Education	Sumterville
Reese, John Lewis	Mech. Eng.	Pensacola, Fla.
Reynolds, Robert Bethel	Chem. Eng.	Guntersville
Riley, Emmett Wesley	Mech. Eng.	Punta Gordo, Fla.
Roberts, Phil Taylor	Elec. Eng.	Montgomery
Rudolph, Nathan Bettis	Agriculture	Pleasant Hill
Ryman, Harold Edward	Elec. Eng.	Hastings, Fla.
Samford, Crawford Alexander	General	Opelika
Scallo, Vincent Augustine	Chem. Eng.	Birmingham
Schaub, Alex McKay	Mech. Eng.	Eufaula
Scott, Ernest DeWitt	Elec. Eng.	Cropwell
Semmes, Oliver John, Jr.	Civ. Eng.	Pensacola, Fla.
Sheffield, Clifford	General	Pine Hill
Shelley, Levie Hightower	Civ. Eng.	Eufaula
Simmons, Lawrence Glenn	Civ. Eng.	Ashville, N. C.
Simpson, Robert Lee, Jr.	Civ. Eng.	Birmingham
Sitz, Willard Clarence	Civ. Eng.	Gadsden
Smith, Charles Milton	Chem. Eng.	Montgomery
Smith, Charles Samuel	Mech. Eng.	LaFollette, Tenn.
Snapp, William Thomas	Mech. Eng.	Ensley
Spann, Jerome Allen	General	Dothan
Stevenson, Joe Wilson	Elec. Eng.	Notasulga
Stewart, Ira Melson	Civ. Eng.	Newnan, Ga.
Stockelberg, Frank Kevan	Elec. Eng.	Panama, C. Z.
Strother, George Williams	Elec. Eng.	Camden
Swango, Beverly Holmes	Elec. Eng.	Birmingham
Swanson, Algert Rich	Elec. Eng.	Gadsden
Sweet, Henry W.	Agriculture	Bessemer
Tapscott, Leldon Hunter	Agriculture	Falkville
Taylor, Clara Ramsay	Spec. Arch.	Auburn
Taylor, Robert Wooddy	Agriculture	Buffalo
Thomas, William Bertrand	Chem. & Met.	Sylacauga
Thornton, Ingram P.	Agr. Education	Rogersville
Timberlake, Phil Samuel	Elec. Eng.	Stevenson
Treadwell, Thomas Andrew	Agr. Education	Dadeville
Trees, Benjamin Nelson	Elec. Eng.	Birmingham
Turk, Clarence Hale	Mech. Eng.	Marion

Turner, Warren Candler	Elec. Eng.	Birmingham
Vann, Homer King	Architecture	Opelika
Walker, Oskie Benning	Mech. Eng.	Uchee
Warfield, Ralph Henry	Civ. Eng.	San Domingo, D. R.
Warner, Clarence Wilbur	Elec. Eng.	Jackson
Weaver, Robert Edgar	Elec. Eng.	Birmingham
Whitaker, Roy Baird	Agriculture	Paint Rock
Wiatt, John Edward, Jr.	Elec. Eng.	Auburn
Wilber, Margaret Ellen	General	Plaquemine, La.
Williams, Lemmie Lee	Agr. Education	Rutledge
Wingate, Edwin H.	Mech. Eng.	Birmingham
Winston, Charles Henry, Jr.	Agriculture	Geiger
Winter, Leonard Earl	Elec. Eng.	Sheffield
Wise, Helen	General	Auburn
Wood, Ernest Sanford	Chem. Eng.	Bucatanunna, Miss.
Wood, William Thorington	General	Montgomery
Woolf, Joseph Henry	Pre-Medical	Piedmont
Wright, Emel Francis	Agriculture	Auburn
Wynn, Andrew Malcolm	Applied Elec.	Floral
Yarbrough, Oscar DeMelle	Pre-Medical	Auburn
Zachry, Charles Candler	Elec. Eng.	Notasulga

FRESHMAN CLASS

Abbott, Frank R.	Chem. & Met.	Birmingham
Adams, Bert Hamil	Chem. Eng.	Gadsden
Alexander, John Loftin	Elec. Eng.	Prattville
Allman, Terrell Pettus	Agr. Education	Guin
Anderson, John Pelham	Elec. Eng.	Montgomery
Anderson, William Monroe	Elec. Eng.	Birmingham
Argo, J. Magnus	General	Talladega
Ashmore, Smith Warren	Agriculture	Scottsboro
Baisden, Fred Randolph	Elec. Eng.	Andalusia
Baker, Fred Pittman	Agriculture	Standing Rock
Barber, Hugh	Elec. Eng.	Birmingham
Barber, William Henry, Jr.	Agriculture	Moultrie, Ga.
Barefield, Richard James	Mech. Eng.	Americus, Ga.
Barks, Earl Allen	Mech. Eng.	Birmingham
Barnes, Florence	Home Economics	Ozark
Baxley, Kent Kearney	Elec. Eng.	Birmingham
Bayliss, Samuel Welborne	Elec. Eng.	Birmingham
Beasley, Browder Locke	Pharmacy	Clayton
Beaty, James Albert	Agr. Education	Louisville
Bell, Joe Davis	Pre-Medical	Albany
Bell, Lawrence	Mech. Eng.	Pensacola, Fla.
Bell, Raymond Earle	Elec. Eng.	Pensacola, Fla.
Bender, Finley Seagle	Arch. Eng.	Chattanooga, Tenn.
Betts, Robert Andrew	Elec. Eng.	Opelika
Bird, Marion Taylor	Chem. Eng.	Citronelle
Bowling, Rudyard Douglas	Elec. Eng.	Mobile
Boyd, Daniel Reid	Chem Eng.	Auburn
Boyd, Mina	Home Economics	West Point, Ga.
Bradley, William Edward	Civ. Eng.	LaPine
Bridges, Chester Cyrus	Agriculture	Notasulga
Bumgarner, Paul Eugene	Elec. Eng.	Fulton
Burns, Robert Lee	General	Lincoln
Campbell, Amby	Pharmacy	Crossville
Campbell, Byron G.	Mech. Eng.	Pensacola, Fla.

Campbell, William Edwards	Arch. Eng.	Greenville
Cannon, Herbert Eugene	Pre-Medical	Birmingham
Carmichael, Archie D.	General	Dothan
Carrington, John Bruce	Chem. Eng.	Anniston
Carter, Edmond Hobdy	Agriculture	Pike Road
Carter, Fred	General	Birmingham
Cary, Alice	Home Economics	Auburn
Cary, Annabel Florence	Home Economics	Ensley
Cason, Earle	Agriculture	Centre
Cathcart, Donald F.	General	Montgomery
Clarke, Franklin Ashton	Vet. Medicine	Andalusia
Clark, John Barton, Jr.	Elec. Eng.	Plains, Ga.
Clayton, Joseph Cooper	Mech. Eng.	Cropwell
Clayton, Joe Hugo	Elec. Eng.	Springville
Clem, Elvan Hunt	Elec. Eng.	Sheffield
Clem, James Calvin	Mech. Eng.	Sheffield
Cobbs, Richard Hooker	Elec. Eng.	Gadsden
Coleman, George Albert	General	Fruitdale
Collins, Allen D.	Elec. Eng.	Selma
Conner, Thomas Ganaway	Elec. Eng.	Andalusia
Cooper, Blucher Hamilton	Elec. Eng.	Montgomery
Cooper, William Ewing	Arch. Eng.	Montgomery
Corbitt, Hugh Emory	Elec. Eng.	Hartford
Cosper, Lonnie	Chem. Eng.	Gadsden
Cottle, Clifford Lee	Pharmacy	Gadsden
Coulter, Carl	General	Chattanooga, Tenn.
Cousins, Lorenzo McApine	General	Brookwood
Crabbe, Benjamin Frederic, Jr.	General	Birmingham
Crain, Paul	Agriculture	Lamison
Creel, Harold Preston	Elec. Eng.	Coffee Springs
Curtis, Miriam	Pharmacy	Auburn
Daniel, Alton	General	LaGrange, Ga.
Dantzler, Mortimer Owens	Agriculture	Orangeburg, S. C.
Davis, Mayo	General	Bethune, S. C.
Dean, James Maxwell	Architecture	Monroeville
de Graffenried, E. T.	General	Seale
DelHomme, Elmer Emile	Civ. Eng.	Mobile
Dickinson, Oscar McKinley	Agriculture	Evergreen
Diseker, Robert Arthur	High. Eng.	Birmingham
Doughtie, Howard Jennings	Elec. Eng.	Columbus, Ga.
Drake, Hubert Samuel	Civ. Eng.	Birmingham
Drake, William Driver	Elec. Eng.	Middletown, O.
Dudley, Charles T.	Architecture	Columbus, Ga.
Duncan, Mary Elizabeth	Home Economics	Auburn
Duran, Albert Edward	Elec. Eng.	Columbiana
Ebersole, Claude David, Jr.	Agriculture	Birmingham
England, John Edwin	Civ. Eng.	Mobile
Englehardt, Allen Hilty	Mech. Eng.	Birmingham
Erwin, Frank Albert	Agriculture	Tarrant
Espy, John Jolly	General	Headland
Ethridge, Lewis Lawrence	Agr. Education	Clio
Evans, John Parker	Civ. Eng.	Birmingham
Evans, Richard Coleman	General	Myrtlewood
Falkner, Max	Architecture	Bessemer
Farley, Earle Roscoe	Elec. Eng.	Leeds
Fleming, John Chester	Mech. Eng.	Opp
Fleming, Wm. Malcolm	Elec. Eng.	Brundidge
Floyd, Frank	Agr. Education	Clayton

Ford, Bartlett Herbert	Agr. Education	Hartford
Ford, Max	Civ. Eng.	Hamilton
Forrester, Jesse	General	Dothan
Frazer, Nathan Hix	Mech. Eng.	Belle Ellen
Freeland, James Armstrong	Civ. Eng.	Selma
Fullan, Lysbeth Katherine	Home Economics	Auburn
Gaines, J. C., Jr.	Agriculture	Lineville
Gardner, Howard Keith	Civ. Eng.	Montgomery
Garvin, David Lawson	Elec. Eng.	Rock Run
Gibbs, Samuel John	Agriculture	Auburn
Gilchrist, Robert Allen	Elec. Eng.	Montgomery
Gilliland, William Harold	Elec. Eng.	Goodwater
Glasgow, Parker Anthony	Pre-Medical	Pratt City
Glenn, William Ellis	Elec. Eng.	ChIPLEY, Ga.
Graf, Elmer	Elec. Eng.	Cullman
Graham, James Frank	General	Talladega
Grant, George Addison	Agr. Education	Marbury
Graves, Luther	Agr. Education	Blountsville
Green, Hal	Agriculture	Dothan
Grubbs, Thomas DeKalb	Elec. Eng.	Clayton
Hain, Mary Caroline	Home Economics	Selma
Hamilton, James Edward	Agr. Education	Rogersville
Hancock, John Hilliard	Elec. Eng.	Mobile
Hancock, Murray	Agriculture	Morris
Harbin, Samuel Walton	Civ. Eng.	Luverne
Hare, Emily Morrison	General	Auburn
Hare, Francis Hutcheson	General	Monroeville
Harkins, Mitchell	Civ. Eng.	Bessemer
Harman, Arthur Fort, Jr.	Chem. Eng.	Montgomery
Harris, Albert Thomas	Agriculture	Birmingham
Harris, Joe	Pharmacy	Marion
Harris, Julian	General	Decatur
Harris, Patrick Bryant	Chem. & Met.	Sheffield
Harris, Peter Horace	Agr. Education	Plantersville
Harrison, Walter Lewis	Architecture	Montgomery
Harvey, William Augustus	Mech. Eng.	Montgomery
Head, Leslie	Arch. Eng.	Cleveland
Hearn, Oliver Douglas	General	Opelika
Heath, Thomas Vernon	Elec. Eng.	Anniston
Hendrick, Walter Brown	Civ. Eng.	Hurtsboro
Hentschel, Frank Herman	Elec. Eng.	Birmingham
Hereford, Roy Nichols	General	Gurley
Heiber, John George	Elec. Eng.	Cullman
Hill, Lee McClain	Elec. Eng.	Birmingham
Hines, James Edwin	Elec. Eng.	Americus, Ga.
Hinson, Cecil Rudolph	Pre-Medical	Octagon
Hinton, John Rush	Elec. Eng.	Prattville
Hixon, Charles Graham	Elec. Eng.	Perote
Holley, Robert Paul	Civ. Eng.	Hamilton
Holmes, Ernest Douglas	Elec. Eng.	Dothan
Holstun, Reese C.	General	Waverly
Howell, McKinley	Pharmacy	Bexar
Hugenschmidt, Edward Joseph	Civ. Eng.	Birmingham
Hughes, Bode	Pre-Medical	Warrior
Ikerman, Joseph Alexander	Elec. Eng.	Selma
Jackson, George Butler	Elec. Eng.	Hartselle
Jackson, Hubert S.	High. Eng.	Clairmont Springs
Jager, Robert John	Elec. Eng.	Bessemer

James, Edward Bedelle	General	Waverly
James, Joseph Charles	Civ. Eng.	Enterprise
Jaysane, Lawrence Magnus	Architecture	Birmingham
Jester, John Calloway, Jr.	Agr. Education	Camp Hill
Jones, Bruce McGill	General	Birmingham
Jones, Henry Edward	Chem. Eng.	Andalusia
Jones, Jonathan Harley	Pharmacy	Dothan
Jordan, J. Fletcher	Elec. Eng.	Lanett
Judy, Lester R.	Elec. Eng.	Moulton
Keirce, James Brunson	General	Greenville
Killgore, Ernest Samples	Chem. Eng.	Birmingham
Kincaid, Cosper	Mech. Eng.	Leeds
King, Paul	Elec. Eng.	Auburn
Knabe, Henry F., Jr.	Elec. Eng.	Montgomery
Knowles, Howard Hawkins	Elec. Eng.	Longview
Komp, Fred Thompson	Agriculture	Hattiesburg, Miss.
Lamar, Mildred	General	Auburn
Landers, Eli Frank	Agr. Education	Delta
Langley, Thomas Hubert	Agr. Education	Camp Hill
Lardent, Charles Lewis	Elec. Eng.	Selma
Latimore, David Snodgrass	Mech. Eng.	Chattanooga, Tenn.
Latimore, Daniel Webster	Elec. Eng.	Chattanooga, Tenn.
Lazenby, Elbert Kenneth	Mech. Eng.	Monroeville
LeBron, Adolphe	Civ. Eng.	Wetumpka
Lee, Alfred Mudge	Agriculture	Evergreen
Lee, T. Pete	Agriculture	Elba
Lester, Maurice Lorrain	Elec. Eng.	Macon, Ga.
Lewis, Jack Weld	General	Atlanta, Ga.
Lock, Robert Lewis	Mech. Eng.	Mobile, Ala.
McArthur, Henry Green	Pharmacy	Slocomb
McBryde, Harvey B.	General	Dothan
McCall, Grace	Home Economics	Opelika
McConnell, Alwyn York	Elec. Eng.	Birmingham
McCormick, William Lytelle	General	Jacksonville
McEachern, Thomas Ray	General	Louisville
McIlwain, William T.	Civ. Eng.	Lakeland, Fla.
McIntosh, John Willis	Chem. Eng.	Carbon Hill
McKinney, Wallace	Mech. Eng.	Mobile
McKinnon, John Curtis	Elec. Eng.	Talladega Springs
McLaren, William Douglas	Elec. Eng.	Birmingham
McPherson, John Warren	Elec. Eng.	Montgomery
Malloy, Martin Luther	Pre-Medical	Eutaw
Mandy, George Herbert	Elec. Eng.	Ensley
Maples, Emmett Starkey	General	Scottsboro
Marbury, John Grundy, Jr.	Mech. Eng.	Lathrop
Marquis, Marius	Elec. Eng.	Selma
Martin, Rinaldo	General	Enterprise
Mason, Winton Frank	General	Brewton
Massee David Linton	Mech. Eng.	Marshallville, Ga.
Mathews, Frank M., Jr.	General	Mathews
Matthews, George Wheeler	Elec. Eng.	Montgomery
Merchant, Willis	Elec. Eng.	Birmingham
Meyer, Fred Durling	Mech. Eng.	Montgomery
Midgette, Maurice William	General	Mobile
Milligan, Harris Evan	General	Newton
Mills, Robert H.	Agr. Education	LaPine
Milton, John IV	Chem. Eng.	Marianna, Fla.
Mitchell, Lyle Davis	Pre-Medical	Leeds

Moore, Lynn Mitchell	Elec. Eng.	Nadawah
Moragne, Eugene Revel	Chem. Eng.	Gadsden
Mull, Mac Page	Architecture	Alexander City
Mullen, Leo E.	Elec. Eng.	Mobile
Mullins, Felston	Agr. Education	Clanton
Murphy, Marion Bunyan	Elec. Eng.	Capps
Muse, Cicero Gordon	Elec. Eng.	Montgomery
Nalley, Joel	Elec. Eng.	Birmingham
Nason, George Henry	Civ. Eng.	Birmingham
Nelson, Samuel Edgar	Elec. Eng.	Montgomery
Nesbitt, Thomas Mills, Jr.	Mech. Eng.	Birmingham
Newton, Charles Edgar	Elec. Eng.	LaGrange, Ga.
Nicaise, Placide Dominia	Vet. Med.	Kiln, Miss.
Nichols, James Alexander	Elec. Eng.	Marion
Norris, Roy Hart	Pre-Medical	New Brockton
Ollinger, George Batchelder	Elec. Eng.	Mobile
Overton, Ambrose Elma, Jr.	Pre-Medical	Huntsville
Owen, Thomas Erwin	Agriculture	Opelika
Parker, Rhett Senn	Elec. Eng.	Andalusia
Pattillo, Lewis Carl	Elec. Eng.	Hartselle
Payne, John Edwin	Elec. Eng.	Phoenix
Pearson, Clyde Collins	Architecture	Montgomery
Petersen, Sidney Dean	Agriculture	Chattanooga, Tenn.
Petty, Daniel Earl	Agriculture	Albany
Phillips, Osa Martin, Jr.	Chem. & Met.	Anniston
Pickens, William Caragan	Agriculture	Greensboro
Pierce, Frank Barto	General	Louisville
Porter, Dorothy	Home Demonstration	Dothan
Porter, William	Elec. Eng.	Dothan
Powell, William Frank	Chem. Eng.	Birmingham
Priester, Clarence B.	Agriculture	Opelika
Proctor, Thomas Fletcher	General	Opelika
Pugh, Isaac Stephens	Pharmacy	Jackson
Quarles, Harry	Arch. Eng.	Troy
Randolph, Walter Leon	Agriculture	Birmingham
Reeder, Robert Linden	Agr. Education	Rogersville
Reeves, Jerry Healand, Jr.	Elec. Eng.	Eufaula
Relfe, John Nicholson	Elec. Eng.	Mt. Meigs
Riddle, Sam Reed	Agriculture	Birmingham
Riley, Aubey Hilton	Civ. Eng.	Slocomb
Riley, James Frost, Jr.	Arch. Eng.	Birmingham
Riley, Perry Vaden	Elec. Eng.	Headland
Roberts, James Bailey	General	Albertville
Robinson, Jesse Benjamin IV.	General	Waverly
Rogers, Clarence Coons	Elec. Eng.	Notasulga
Rush, Henry C.	General	Bessemer
Rushin, James Elsberry	General	Montgomery
Russell, Rudolph	Architecture	Attalla
Russell, William Francis	Elec. Eng.	Selma
Salter, Homer Seth	Elec. Eng.	Mulga
Salts, Carl Bradley	Arch. Eng.	Lockhart
Salts, Coscar Joseph	Pre-Medical	Lockhart
Salzman, Morris	Civ. Eng.	Birmingham
Samford, Thomas Drake, Jr.	General	Opelika
Savage, Warren T., Jr.	Elec. Eng.	Montgomery
Schachner, Julius Anthony, Jr.	Elec. Eng.	Greensboro, N. C.
Schock, James Albert	General	Mobile
Schwekendiek, Herman Frederick	Mech. Eng.	Mobile

Scott, Albert LaFayette	Civ. Eng.	Longview
Sellers, Joseph	Agr. Education	Ramer
Sewell, William Erwin	Agriculture	Sayreton
Shaffer, Charles Edward	Mech. Eng.	Pratt City
Sheldon, Edwin Albert	Agr. Education	Fairhope
Shell, Thurston Bartow	General	Georgiana
Sheridan, Fred Leslie	Mech. Eng.	Bessemer
Shivers, James Fitzgerald	Agriculture	Marion
Shuptrine, Cecil Fontaine	Agriculture	Safford
Simmons, James Bernard	General	Andalusia
Simmons, John L.	Elec. Eng.	Skipperville
Sims, Floyd	Civ. Eng.	Florence
Slater, Stanley McDonald	General	Birmingham
Smith, Herman Allyn	Pre-Medical	Marbury
Smith, Julian Phillips	Elec. Eng.	Cuba
Smith, Malcolm Floyd	Mech. Eng.	Prattville
Smith, Maxie H.	Chem. Eng.	Macon, Ga.
Smith, Olin	Pharmacy	Dawson
Smith T, Winston	General	Opelika
Snuggs, Robert Lee	Agr. Education	Roanoke
Sowell, Sam Sanford	Elec. Eng.	Brewton
Spruiell, Claude E.	Elec. Eng.	Leeds
Stain, Ray Washington	Elec. Eng.	Georgiana
Steele, Earl Lee Roy	Mech. Eng.	Bessemer
Stephens, Jay	Pharmacy	Abanda
Stephenson, Henry Douglas	Chem. & Met.	Moulton
Stewart, Bernard Patrick	Agriculture	Prattville
Stewart, James Floyd	High. Eng.	Huntsville
Stewart, Rufus	Elec. Eng.	Prattville
Stockelberg, John Gerald	Civ. Eng.	Panama, C. Z.
Stough, Curtis Noble	Civ. Eng.	LaPine
Strange, Willie	Civ. Eng.	Natchitoches, La.
Stripling, James Aaron	Architecture	Montgomery
Struppa, Randolph W.	Mech. Eng.	Columbus, Ga.
Sutcliffe, Walter Jay	Chem. Eng.	Nutley, N. J.
Sylvest, Burke	Vet. Med.	Franklinton, La.
Tamplin, Marye	Home Economics	Auburn
Taylor, George Hugh	Elec. Eng.	Greensboro
Taylor, Margaret Claire	General	Auburn
Taylor, Robert Perkins	Elec. Eng.	Andalusia
Taylor, William Clyde	Agriculture	Pratt City
Tharp, Chonnie Bonner	Elec. Eng.	Chiplev, Fla.
Thomas, Douglas Lee	Elec. Eng.	Smithville, Ga.
Thomas, Earle	Agr. Education	Bolling
Thomas, Eugene Watson	Applied Elec.	Kellyton
Thomas, Georgia	Home Economics	Cullman
Thompson, Benjamin Richard	Agriculture	Montgomery
Thompson, Jasper Fritz, Jr.	Elec. Eng.	Centreville
Thompson, William Anthony	Elec. Eng.	Opelika
Trammell, Robert Chiles	Mech. Eng.	Greenville, S. C.
Trawick, William Douglas	General	Opelika
Trawick, Thomas Wilson	General	Montgomery
Tuggle, T. C.	Elec. Eng.	West Blocton
Turner, Aubrey Douglas	Agr. Education	Pell City
Turner, Paul Sanders	Civ. Eng.	Anniston
Turner, Tommie	Home Economics	Auburn
Turner, William J	Elec. Eng.	Auburn
Tyler, Harvey Milner	Agriculture	Birmingham

Wallace, Fred James	Mech. Eng.	Scottsboro
Wallace, William Meredith	Mech. Eng.	Rockford
Ware, William Judson, Jr.	General	Birmingham
Watson, Clyde DeLamar	Civ. Eng.	Clayton
Watson, J. Ray	Elec. Eng.	Tuskegee
Webb, Jesse T.	Elec. Eng.	Piedmont
Weidenbach, William Henry	Agriculture	Boyles
Whatley, Thomas Earl	Agriculture	Opelika
Whatley, Wilmer Lavoisa	Agriculture	Opelika
Whigham, Robert Schley	Elec. Eng.	Louisville
White, Camerom	Elec. Eng.	Livingston
White, William Thomas	Chem. Eng.	Spring Garden
Wilder, Tracey Bangs	Chem. Eng.	Andalusia
Wilks, Joe Lomax	Pre-Medical	LaGrange, Ga.
Williams, Aubrey Joseph	High. Eng.	Gadsden
Williams, Edward Foster	Pre-Medical	Carrollton, Ga.
Williamson, Arthur H.	Vet. Med.	Auburn
Willingham, Philip, Jr.	Agriculture	Emelle
Willoughby, Graham Paul	Civ. Eng.	Birmingham
Wilson, Chester Frederick	Elec. Eng.	Brewton
Wilson, Eric Rex	Arch. Eng.	Pensacola, Fla.
Wilson, Jeffrey Alexander	Chem. & Met.	Anniston
Wood, Josiah Robins	Civ. Eng.	Columbia
Wood, William Byron	Elec. Eng.	Phoenix
Wolf, Ray Michael	General	Piedmont
Wynne, Eugene L.	Civ. Eng.	Birmingham
Young, Elizabeth	Home Economics	Auburn
Young, James Luther	General	Talladega
Young, William Alex	Agr. Education	Vernon
Young, William C.	Civ. Eng.	Montgomery

TWO-YEAR COURSE IN PHARMACY

SECOND YEAR

Ariail, Henry Ellis	Birmingham
Bankson, John Orion	Gadsden
Bedingfield, Charles Albert	Rogersville
Dunn, John Edward	Abbeville
Gaston, Charles Ware	Fayetteville
Hagood, Cecil Crum	Evergreen
Hannon, Adrian Ward	Eclectic
Hanson, John Henry	Waverly
Hughes, George Walton	Madison
Johnson, Dewey Hobson	Brundidge
Lambert, George McLeod	Bay Minette
Sellers, Hugh	Cottonwood
Shirley, Lloyd H.	Abbeville
Temerson, Melton	Carbon Hill

FIRST YEAR

Agee, LeRoy Taylor	Lamison
Champion, Charles Knox	Huntsville
Childre, Lewis E.	Opp
Dalton, William Casey	Opp
Fletcher, Shelby	Andalusia
Ford, Jesse Hill	Marion
Killough, Erin	Honoraville
Lonergan, Clarence Edward	Sumrall, Miss.

McMurray, Fred Harrington	Heflin
Myers, Lucien Evans, Jr.	Mobile
Nunnelley, Mack	Cullman
Page, George Cary	Opp
Robinson, James Almon	Rockford
Sims, Admiral Dewey	Milltown
Whigham, Gus Dean	Blue Springs
White, John Howard	Selma
Williams, Harry Clanton	Dothan
Wright, Cornelius Curtis	West Blocton

SPECIAL STUDENTS

Allen, Ed. H.	General	Selma
Benson, Samuel Ocile	Vet. Med.	Foley
Blake, Graves Blair	Pre-Medical	Sheffield
Bross, Wm. L. McKinney	Mech. Eng.	Nixburg
Braswell, J. B.	Agriculture	Fitzpatrick
Brown, Richard S.	Applied Elec.	Birmingham
Cadenhead, A. C.	Agriculture	Auburn
Creel, Ben W.	Vet. Med.	Haig
Cuadras, C., Jr.	Vet. Med.	Santiago, Cuba
DeLong, Chauncey Hall	Pharmacy	Mobile
Fischer, Edwin Arden	Civ. Eng.	Louisville, Ky.
Gantt, Donald B.	Wireless	Gantt
Graves, Hodson William	Vet. Med.	Pageland, S. C.
Grigsby, Bien	Elec. Eng.	Bessemer
Grisham, Marvin Vaughan	General	Athens
Hale, Gordon Winston	General	Birmingham
Hamby, Edward Hammond	Agriculture	Falco
Harvell, William Roy	Elec. Eng.	Rayville, La.
Haynie, Seth Stephens	Agriculture	Tignall, Ga.
Heflin, James Thomas, Jr.	General	LaFayette
Hill, Howard H.	Agriculture	Wilsonville
Hummel, Edwin Forrest	Agriculture	Huntsville
Jenkins, Ulysses Clanton	Agriculture	Corona
Jones, James Merriwether	Applied Elec.	Atlanta, Ga.
Kelley, Andrew Feagin	Arch. Eng.	Midway
King, Russell Berry	Arch. Eng.	Obion, Tenn.
Lee, Harry Meldrim	Applied Elec.	West Point, Ga.
McDonald, Ernest Percy	Mech. Eng.	Auburn
McLendon, Merritt James	Pharmacy	Luverne
Mink, Hiram Carson	General	Winter Garden, Fla.
Mitchell, Talmage A.	Pharmacy	Arkadelphia
Pace, Robert Carlton	Elec. Eng.	Anniston
Parks, William McRae	Agriculture	Fayetteville
Persons, Seth Gordon	Applied Elec.	Montgomery
Petersen, Carl Stengade, Jr.	Agriculture	Chattanooga, Tenn.
Pilcher, Jodie Thomas	Pharmacy	Leslie, Ga.
Ray, Elgin Amos	Pre-Medical	Wilsonville
Rayfield, D. H.	Pharmacy	Weogufka
Savage, Samuel Payne	Pharmacy	Piedmont
Screws, Almer Landers	Agriculture	Andalusia
Screws, Elmer Landers	Agriculture	Andalusia
Speer, Cary	Pharmacy	Clanton
Spencer, Leon	Pre-Medical	Goshen
Shamblin, William Earl	Chemistry	Rome, Ga.
Stacy, Warren Curtis	Elec. Eng.	Birmingham

Stapleton, James Mathews	Chem. & Met.	Woodward
Stoves, William Henry	Mech. Eng.	Pratt City
Styles, Bernard William	Architecture	Atlanta, Ga.
Swanner, Roy	Agriculture	Luverne
Trammell, Allen R.	Agriculture	Comer
Worthington, Lewis C.	Applied Elec.	Cullman
Winn, Chester Williamson, Jr.	Architecture	Birmingham

VOCATIONAL COURSES

SPECIAL STUDENTS

Adams, John Preston	Unit Agriculture	Alexander City
Adcock, Zolan C.	Unit Agriculture	Notasulga
Allbritten, Fred	Unit Agriculture	Blountsville
Andrews James B.	Unit Agriculture	Wesson, Miss.
Arceneaux, Robert	Unit Agriculture	Derouen, La.
Bailey, Norborne Foster	Applied Elec.	Demopolis
Baker, Robert Haden	Unit Agriculture	Gadsden
Baker, Richard Loyd	Unit Agriculture	Berry
Baldwin, Moses Shopner	Applied Elec.	Midland City
Barnard, Radford Montgomery	Pre-Medical	Union Grove
Bates, Willie Claud	Unit Agriculture	Ft. Deposit
Beasley, Charles	Vet. Med.	Banks
Betts, James Alonzo	Applied Elec.	Tallassee
Bilbrey, Elba Estors	Unit Agriculture	Vincent
Black, James Alvin	Unit Agriculture	Natchez
Blackman, Arthur	Tractor	Warrior
Blackwell, Samuel	Applied Elec.	McNeil, Miss.
Blanchet, Kossuth J.	Applied Elec.	LaFayette, La.
Boatwright, Matthews Ozra	Unit Agriculture	Mt. Willing
Bonin, Louis Joseph	Applied Elec.	St. Martinsville, La.
Booker, Henry T.	Unit Agriculture	Bay Minette
Boshell, Harvey Monroe	Unit Agriculture	Nauvoo
Bowdin, Guy	Unit Agriculture	Elba
Breedlove, Joseph S.	Unit Agriculture	Opp
Brock, Dewey Hobson	Applied Elec.	Warnerton, La.
Brosemer, Peter Constantine	Unit Agriculture	Huntsville
Brown, George	Unit Agriculture	Opelika
Brown, Robert Albert, Sr.	Vet. Med.	Kansas City, Mo.
Bryan, Charles Jesse	Unit Agriculture	Auburn
Bullard, Wesley Daniel	Unit Agriculture	Blountsville
Burks, Peter DeMarcus	Unit Agriculture	Renfroe
Bush, Lewis Bernice	Unit Agriculture	Clayton
Buxton, Samuel Evington	Machine Shop	Selma
Calloway, Lem Burkley	Applied Elec.	Jasper
Calloway, Robert Howard	Unit Agriculture	Deatsville
Campbell, Charles Watkins, Jr.	Applied Elec.	LaFayette
Carter, A. Z.	Unit Agriculture	Pyriton
Carter, John Freeman	Agriculture	Birmingham
Clark, James Gordon	Applied Elec.	Whigham, Ga.
Clark, Jasper Lee	Unit Agriculture	Camp Hill
Coker, Comer Jesse	Unit Agriculture	Mt. Willing
Courtney, Roy Bernard	Applied Elec.	Selma
Crawford, Cleborne Walthal	Unit Agriculture	Eclectic
Cox, Linnie	Unit Agriculture	Clio
Curlee, Titus Sylvester	Unit Agriculture	Copeland
Darnell, Marshall F.	Unit Agriculture	Notasulga
Davis, Dayton James	Architecture	Andalusia

Davis, Grady Woodfin	Unit Agriculture	Tuskegee
Deal, Joseph Nix	Unit Agriculture	Cottonwood
Dean, Samuel Jefferson	Mech. Drafting	Montgomery
Dickson, Grover Young	Applied Elec.	Thomaston
Donaldson, James W.	Unit Agriculture	Agricola, Miss.
Dorrill, Frank	Applied Elec.	Banks
Douglas, James William	Wireless	Talladega
Dyer, Luther Thomas	Agr. Education	Malone
Dyess, Alto Franklin	Unit Agriculture	Troy
Earnest, Stancle Powell	Unit Agriculture	Bessemer
Edwards, Herbert Giles	Vet. Med.	Sylacauga
Evans, Charles W.	Architecture	Dothan
Fant, John William	Agr. Education	Liberty
Faught, Spurgeon Elbert	Applied Elec.	Parrish
Fields, Hughie J.	Unit Agriculture	Altha, Fla.
Fiscus, Charles Ulysses	Vet. Med.	Lansing, Mich.
French, Cyril Green	Pharmacy	Brundidge
Gamble, Robert Fulton	Applied Elec.	Headland
Gann, David Littleton	Unit Agriculture	Ft. Payne
Gardner, David B.	Applied Elec.	Huntsville
Garner, Franklin M.	Unit Agriculture	Bushnell, Fla.
Garrett, Dan P.	Unit Agriculture	Delta
Gephart, Lawrence	Unit Agriculture	Miamisburg, O.
Gilbert, Benjamin Franklin	Unit Agriculture	Warrior
Giles, Dewey Edgar	Applied Elec.	Ensley
Gillis, John Patrick	Civ. Eng.	Brewton
Gilmore, Rupert Glenn	Unit Agriculture	Brundidge
Goree, Harper	Unit Agriculture	Opelika
Grant, Raymond Thomas	Agriculture	Guntersville
Grumbles, David Moore	Unit Agriculture	Hayneville
Haden, William Wallace	Applied Elec.	Huntsville
Hall, Orson Spencer	Tractor	Hackleburt
Hammock, Willis Jerdon	Tractor	Union Grove
Haraway, Bayless Shone	Pharmacy	Rogersville
Harrison, Gladden	Unit Agriculture	Montgomery
Helms, Carlos	Vet. Med.	Dothan
Hicks, Leon Walter	Applied Elec.	Andalusia
Hixon, Sparks	Pharmacy	Auburn
Hodges, James Luther	Unit Agriculture	Wadley
Holland, Virgil DeLoach	Unit Agriculture	Horton
Huges, Jeff	Unit Agriculture	Warrior
Hunter, Orello Austin	Unit Agriculture	New Brockton
Inzer, Roy R.	Unit Agriculture	Birmingham
Jackson, Jefferson Reuben	Unit Agriculture	Clanton
Jarrell, William Lindsey	Agr. Education	Auburn
Jarvis, Thos. William Otis	Unit Agriculture	Talladega
Johnson, Allie James	Vet. Med.	Camp Hill
Johnson, Ernest A.	Applied Elec.	Evergreen
Johnson, Noah	Mechanic Arts	Hokes Bluff
Johnson, Robert Joshua	Unit Agriculture	Auburn
Johnston, Arthur Lee	Unit Agriculture	Equality
Johnston, Hunter H.	Civ. Eng.	Brundidge
Jolly, Arnold Burke	Unit Agriculture	Cloverdale
Jones, David Rousseau	Pharmacy	Russellville
Jones, Grover	Unit Agriculture	Clanton
Jones, Lawrence D.	Applied Elec.	Marbury
Jones, Warren C.	Unit Agriculture	Clio
Justice, Herbert Russell	Unit Agriculture	Calcis
Keene, Taylor	Unit Agriculture	Tuscaloosa

Kelley, Henry Grady	Unit Agriculture	Millerville
Kimes, Ethan	Unit Agriculture	Cruger, Miss.
LaGrange, Alcee Michael	Applied Elec.	Patterson, La.
Lamb, Clarence L.	Applied Elec.	Huntsville
Lambert, Joseph Frank	Applied Elec.	Buffalo
Lauderdale, Carl McClellan	Applied Elec.	Deatsville
Lewis, Ulysses	Pharmacy	Birmingham
Little, Dock	Unit Agriculture	Andalusia
Lockett, Hugh	Unit Agriculture	Dadeville
Lybrand, Willie Ora	Unit Agriculture	Dawson
Lynn, James J.	Tractor	Brewton
McClurkin, George Patterson	Applied Elec.	Anniston
McDaniel, Reuben L.	Agriculture	Dozier
McDuff, Murphy Clemons	Applied Elec.	Huntsville
McGlamry, James G.	Unit Agriculture	Deatsville
McLain, Henry H.	Unit Agriculture	Georgiana
McLemore, Robert O'Neal	Unit Agriculture	Rogersville
McMahon, Otis Cyphus	Unit Ag.	Rawles Springs, Miss.
McNeill, Silsbee Lee	Pre-Medical	Jemison
McRae, Harvey A.	Applied Elec.	Clio
McRae, Simon B.	Unit Agriculture	Clio
Mahaffy, Preston	Unit Agriculture	Warrior
Maiden, Walter George	Unit Agriculture	Castleberry
Manci, Orlando Joseph	Agriculture	Daphne
Mansel, Perry E.	Tractor	Grady
Martin, Bennie Robertson	Elec. Eng.	Union Springs
Mason, Edward G.	Unit Agriculture	Silas
Mason, Henry Arleigh	Pharmacy	Isney
Mathis, William Woods	Unit Agriculture	Millport
Mays, Aaron Robert	Unit Ag.	Greenwood Springs, Miss.
May, Chester D.	Unit Agriculture	Auburn
Meadows, James H.	Unit Agriculture	Camp Hill
Miller, Clifford	Unit Agriculture	Georgiana
Miller, John Henry	Unit Agriculture	Haleyville
Miller, William C.	Unit Agriculture	Georgiana
Mitcham, Curtis Eugene	Unit Agriculture	Troy
Mooneyham, Lester Lee	Agriculture	Clio
Montgomery, Charles L.	Applied Elec.	Montgomery
Morgan, John Tee	Agriculture	Maplesville
Neely, Odie B.	Vet. Med.	Obion, Tenn.
Nelson, V. Homer	Applied Elec.	Berry
Pace, Grover C.	Unit Agriculture	Ashland
Peek, Clifford Elijah	Unit Agriculture	Brantley
Perry, Victor Nathaniel	Unit Agriculture	Coal Valley
Phillips, Dennan J. T.	Unit Agriculture	Ariton
Pilkerton, Alvin Ward	Applied Elec.	Greensboro
Plaxco, Glen	Pharmacy	Russellville
Pollard, Vachel Alexander	Mech. Eng.	Leesburg
Ponder, William Joseph	Agr. Education	Boaz
Powell, Bluford Curtis	Tractor	Tallassee
Prather, John Wesley	Unit Agriculture	Dadeville
Pullum, Flem	Unit Agriculture	Malvern
Ray, Fred Marvin	Unit Agriculture	Ashland
Rayfield, Claude Constant	Vet. Med.	Weogufka
Richburg, Ralph Caston	Unit Agriculture	Goshen
Roberts, William Arthur	Unit Agriculture	Cleveland
Robertson, James Wicker	Civ. Eng.	Clayton

Robinson, William John	Drafting	New Orleans, La.
Salvo, Herman Henry	Unit Agriculture	Alexandria
Sands, Laurine Carson	Applied Elec.	Five Points
Scroggins, Rufus	Unit Agriculture	Louisville
Sellers, Everett Tony	Applied Elec.	Local
Shelton, James Mitchell	Applied Elec.	Tuscaloosa
Simmons, Erastus	Unit Agriculture	Skipperville
Smith, Amos	Unit Agriculture	Vincent
Smith, Lee	Unit Agriculture	Lamar
Smith, Walter Raleigh	Unit Agriculture	Geneva
Smothers, Graham M.	Agr. Education	Vincent
Snowden, Lawler Frank	Pharmacy	Pine Apple
Squires, William Jackson	Unit Agriculture	Peterson
Stearns, William F.	Unit Agriculture	Notasulga
Stephens, LeRoy G.	Unit Agriculture	Delta
Sterns, Arthur Lee	Mech. Eng.	Notasulga
Stewart, Percy Myron	Tractor	Andalusia
Stokes, Roy	Applied Elec.	Kissimmee, Fla.
Story, Walter Paton	Unit Agriculture	Auburn
Stringfellow, Lee B.	Unit Agriculture	Auburn
Stuckey, Charles Franklin	Applied Elec.	Andalusia
Tait, Reginald L.	Agriculture	Coy
Tatom, Fred DeLeon	Applied Elec.	Banks
Taylor, Owen Luther	Applied Elec.	Pratt City
Teague, Porter Anderson	Mech. Drafting	Albany
Thames, Dennis Frederick	Unit Agriculture	Red Level
Thomas, Robert Dillard	Unit Agriculture	Gallion
Thomason, Eliza Perry	Unit Agriculture	Grady
Thorp, Hugh Hill	Unit Agriculture	Millerville
Tucker, Ira J.	Unit Agriculture	Rutledge
Vance, William Kinion	Unit Agriculture	Thompson
Vann, Shelby Alto	Unit Agriculture	Ashford
Verzwyvelt, Joseph Henry	Applied Elec.	Alexandria, La.
Walding, Grover Cleveland	Vet. Med.	Midland City
Walker, Clarence C.	Agriculture	Luverne
Walker, William Nathaniel	Unit Agriculture	Aimwell
Ward, James John Franklin	Unit Agriculture	Auburn
Warrick, William Howard	Floriculture	Webb
Watford, Amzie Beach	Unit Agriculture	Slocomb
Welch, Lonzo	Applied Elec.	Luverne
Wesley, Charles Edward	Unit Agriculture	Red Level
Wesson, Luke	Applied Elec.	Alexander City
Whisnant, Ebar	Unit Agriculture	Keener
Williamson, Robert Winfred	Unit Agriculture	Millersville
Wilson, Willard Bryan	Applied Elec.	Mobile
York, August R.	Applied Elec.	Cullman

HOME DEMONSTRATION AGENTS' SHORT COURSE

Bankson, Luella	Franklin	Russellville
Barfield, Esther	Blount	Oneonta
Beasley, Mabel Ray	Jefferson	Birmingham
Bennett, Bettie	Crenshaw	Luverne
Brown, J. E. S.	Tuscaloosa	Tuscaloosa
Carlisle, Ruth	Perry	Marion
Caruthers, Ora C.	Marshall	Guntersville
Dyess, A. F.	Lee	Auburn
Feagin, Mabel L.	Bullock	Union Springs
Ferguson, Bertha Lee	Geneva	Hartford
Griffin, Ila Deane	Limestone	Athens
Jackson, Zelma Gaines	Chambers	LaFayette
Harms, Stella	Calhoun	Anniston
Hinds, M. A.	Jefferson	Birmingham
James, Grace	Dale	Ozark
Jones, Pearl	Conecuh	Evergreen
Lingo, Victoria C.	Barbour	Clayton
Newman, S. Fay	Coosa	Rockford
Nimmo, Josephine	Marion	Hamilton
Peyton, Evelyn	Madison	Huntsville
Plowden, Harriet E.	Talladega	Talladega
Riley, Louise M.	Mobile	Mobile
Shelby, Florence D.	Jefferson	Birmingham
Shook, Mary S.	Covington	Andalusia
Spratling, M. A.	Lauderdale	Florence
Thomas, Lucie	Escambia	Brewton
Thorington, Mamie	Montgomery	Montgomery
Weaver, Olga	Tallapoosa	Dadeville
Whorton, Ruth	Lee	Opelika
Wigley, Mary	Cullman	Cullman
Williams, Iona	Henry	Abbeville
Williams, J. E.	Etowah	Gadsden

SUMMARY

Graduate students	14
Seniors	163
Juniors	203
Sophomores	210
Freshmen	354
Pharmacy (Two-Year Course)	32
Special Students	52
Special Students in Vocational Courses	209
Home Demonstration Agents' Course	32
TOTAL	1269

ACCREDITED SCHOOLS

Post Office	Name of School	Name of Principal
Abbeville	Secondary Agr. School	C. M. McLaurin
Albany	High School	R. W. Cowart
Albertville	Secondary Agr. School	J. W. Letson
Alexander City	High School	J. M. Pearson
Alexandria	Consolidated High School	J. T. Carter
Aliceville	High School	E. A. Thomas
Andalusia	High School	R. C. Brown
*Anniston	Ala. Presbyt'n College	Col. David Park
Anniston	High School	Theo. Rumble, Jr.
*Anniston	Noble Institute	Miss Margaret E. Lee
Athens	Secondary Agr. School	J. M. Atkinson
*Athens	Rivers Academy	Miss Edith West
Atmore	Escambia Co. High School	M. L. Orr
Attalla	Etowah County High School	J. I. Riddle
Auburn	Lee County High School	J. A. Parrish
Bay Minette	Baldwin Co. High School	Rowe Watson
Beatrice	High School	I. F. Simmons
Bessemer	High School	C. C. Moseley
Bessemer, R. 5	Alliance High School	H. A. Fowler
Bessemer, R. 1	Hueytown High School	H. F. Gilmore
Bessemer, R. 3	McAdory High School	B. E. Lee
Birmingham	Central High School	C. J. Going
*Birmingham	Loulie Compton Sem.	Miss Hattie Morton
*Birmingham	Margaret Allen School	Miss Hattie Morton
Birmingham, R. 4	Shades-Cahaba School	J. M. Ward
*Birmingham	Simpson School	J. M. Malone
Blountsville	Secondary Agr. School	J. B. Pennington
*Boaz	Snead Seminary	Dr. William Fielder
Boyles	Jefferson Co. High School	Wm. J. Baird
Brewton	High School	L. O. Kyzar
*Brewton	Downing Indus. Inst.	Rev. J. W. Shofner
Brundidge	Pike Co. High School	V. V. Norton
Butler	Choctaw Co. High School	J. B. Campbell
Camden	Wilcox Co. High School	Geo. S. Clark
Camp Hill	High School	B. H. Wyatt
*Camp Hill	Southern Indus. Institute	Lyman Ward
Carbon Hill	High School	Wm. F. Maynor
Carrollton	High School	G. C. Watkins
Castleberry	Conecuh Co. High School	Sellers Stough
Center	Cherokee Co. High School	C. W. Phillips
Centerville	Bibb County High School	Ralph Thomas
Chatom	Wash. Co. High School	R. E. Hodnette
Citronelle	High School	J. W. C. Brown
Clanton	Chilton Co. High School	S. E. Alverson
Clayton	High School	J. R. Ward
Clio	Barbour Co. High School	Roy K. Hood
Collinsville	High School	Fred M. Nelson
Columbia	Houston Co. High School	L. J. Thomas
Columbiana	Shelby Co. High School	J. R. Kimbrough
Crossville	Geraldine High School	J. L. Appleton
Cuba	High School	W. E. Calhoun
Cullman	Cullman Co. High School	H. G. Dowling
Dadeville	Tallapoosa Co. High	R. E. Thompson
Daphne	Class B. Normal School	H. H. Holmes
Decatur	High School	W. W. Benson

Demopolis	High School	C. B. Gamble
Dothan	High School	John I. Farris, Jr.
Double Springs	Winston Co. High	Ernest H. Dunlap
Eclectic	Elmore Co. High School	Jas. Chrietzberg
Elba	High School	W. B. Speer
Elkmont	Limestone Co. High School	W. L. Davis
Ensley	High School	E. E. Smith
Enterprise	Coffee Co. High School	W. E. Snuggs
Eufaula	High School	H. L. Upshaw
Eutaw	High School	A. F. Jackson
Evergreen	Secondary Agr. School	F. B. Chappelle
Excel	High School	G. M. Veazey
Fairfax	High School	P. C. Ramsay
*Fairhope	School of Organic Educat'n	Paul Nichols
Fayette	Fayette Co. High School	R. L. Reaves
Five Points	High School	M. B. Gross
*Flat Rock	High School	Geo. W. Floyd
Floral	Covington Co. High School	J. E. Hendley
Florence	Coffee High School	J. N. Howell
Fort Deposit	Lowndes Co. High	C. A. Buffington
Fort Payne	DeKalb Co. High School	N. J. Callan
Gadsden	Disque High School	C. A. Donehoo
Geneva	High School	J. J. Holliday
Georgiana	High School	H. N. Lee
Gordo	High School	E. L. Stough
Greensboro	High School	Chas. S. Foster
Greenville	High School	R. L. Marchman
Grove Hill	Clarke Co. High School	D. C. Trexler
Guin	Marion Co. High School	D. L. Hovater
Guntersville	Marshall Co. High School	N. F. Greenhill
Gurley	Madison Co. High School	J. M. Laird
*Hackleburg	Northwest Ala. High	L. G. Alverson
Haleyville	High School	R. D. Russell
Hamilton	Secondary Agr. School	S. H. Gibbons
Hartford	Geneva Co. High School	W. T. Tiller
Hartselle	Morgan Co. High School	J. H. Riddle
Headland	Henry Co. High School	J. J. Yarbrough
Heflin	Cleburne Co. High School	E. J. Landers
Highland Home	Crenshaw Co. High School	C. C. Slaton
Huntsville	High School	C. A. Lloyd
Huntsville, Rt. 2	Riverton High School	J. E. Thompson
*Huntsville	Wills-Taylor School	R. P. Wills
Jackson	Secondary Agr. School	R. D. Powell
Jacksonville	High School	S. D. Smith
Jasper	Walker Co. High School	O. P. South
Johns	High School	H. L. Nipper
Jones' Mill	High School	H. G. Greer
LaFayette	High School	R. V. Kennedy
Lanett	High School	Frank P. Lee
Leeds	High School	J. L. Aders
Leighton	Colbert Co. High School	Robert Hudson
Lincoln	Talladega Co. High School	J. D. Moore
Lineville	Secondary Agr. School	W. H. McDaniel
Louisville	High School	B. H. Boyd
McKenzie	High School	M. Bird
Marbury	High School	P. C. Brook
*Marion	Marion Institute	W. L. Murfee
Marion	Perry Co. High School	K. G. Hoover

Midland City	High School	J. F. Bone
Midway	High School	George D. Owen
Milltown	Chambers Co. High	Chas. B. Sullivan
Mobile	High School	Frank L. Grove
*Mobile	Acad. of the Visitation	Sister Loftus
*Mobile	Knott School	Miss Elizabeth Knott
*Mobile	McGill Institute	Rev. Wm. A. Kerrigan
*Mobile	University Military School	J. T. Wright
Monroeville	Monroe Co. High School	James A. York
Montgomery	Sidney Lanier High School	J. S. McCants
*Montgomery	Barnes School	E. R. Barnes
*Montgomery	Edgar's School	R. B. Edgar
*Montgomery	Margaret Booth School	Margaret Booth
*Montgomery	Starke's Uni.-Home School	J. M. Starke
Morris	Mortimer Jordan High	W. T. Jordan
Moulton	Lawrence Co. High School	J. B. Gibbons
Moundville	Hale Co. High School	M. M. Mathews
*Newton	Baptist Collegiate Inst.	J. A. Lowery
Northport	High School	W. G. Cameron
Notasulga	Macon Co. High School	Thos. S. Bugg
Odenville	St. Clair Co. High School	Wm. A. McGuff
Ohatchie	High School	L. G. Bailey
Oneonta	Blount Co. High School	Elsworth Ellis
Opelika	Clift High School	G. H. Stacy
Opp	High School	M. L. Black
Oxford	Calhoun Co. High School	J. H. Graves
Ozark	High School	J. Floyd Collins
Pell City	High School	W. L. Hicks
Piedmont	Frances E. Willard High	Mary A. Craig
Pike Road	High School	Paul Houchell
Pine Hill	High School	J. T. Balch
Plantersville	Dallas Co. High School	J. L. Bates
Powderly	Jones Valley High School	C. E. Harrison
Prattville	Autauga Co. High School	Alma McGaugh
Ramer	High School	A. C. Anderson
Reform	Pickens Co. High School	F. S. Ward
Repton	High School	Marvin A. Hanks
Roanoke	Handley High School	L. L. James
Rockford	Coosa Co. High School	Curtis Matthews
Rogersville	Lauderdale Co. High School	E. R. Stoker
*St. Bernard	St. Bernard High	Rev. Aloysius Menges
Samson	High School	L. B. Little
Scottsboro	Jackson Co. High School	J. O. Dickinson
Selma	High School	Paul M. Munro
*Selma	Dinkins Training School	S. M. Dinkins
Sheffield	High School	R. B. Nathan
*Spring Hill	Spring Hill High	Rev. J. J. Wallace
Sulligent	High School	J. A. Johnson
Sylacauga	Secondary Agr. School	S. O. White
Talladega	High School	W. H. Templeton
Tallassee	High School	Mrs. W. R. Lancaster
Thomaston	Marengo Co. High School	J. H. Sams
Thomasville	High School	Claude Hardy
*Thorsby	Thorsby Institute	Miss Helen C. Jenkins
Troy	High School	L. D. Bynum
Tuscaloosa	High School	Miss Clara Vernor
Tuscumbia	High School	L. Leftwich
Tuskegee	High School	W. V. Luckie

Union Springs	High School	M. K. Johnson
Uniontown	High School	P. W. Williams
Vernon	Lamar Co. High	J. E. Middlebrooks
Warrior	High School	F. S. Self
Wedowee	Randolph Co. High School	J. M. Cook
West Blocton	High School	A. J. Brown
Wetumpka	Secondary Agr. School	H. C. McDonald
Winfield	High School	J. A. Kuykendall

*Indicates a private school.

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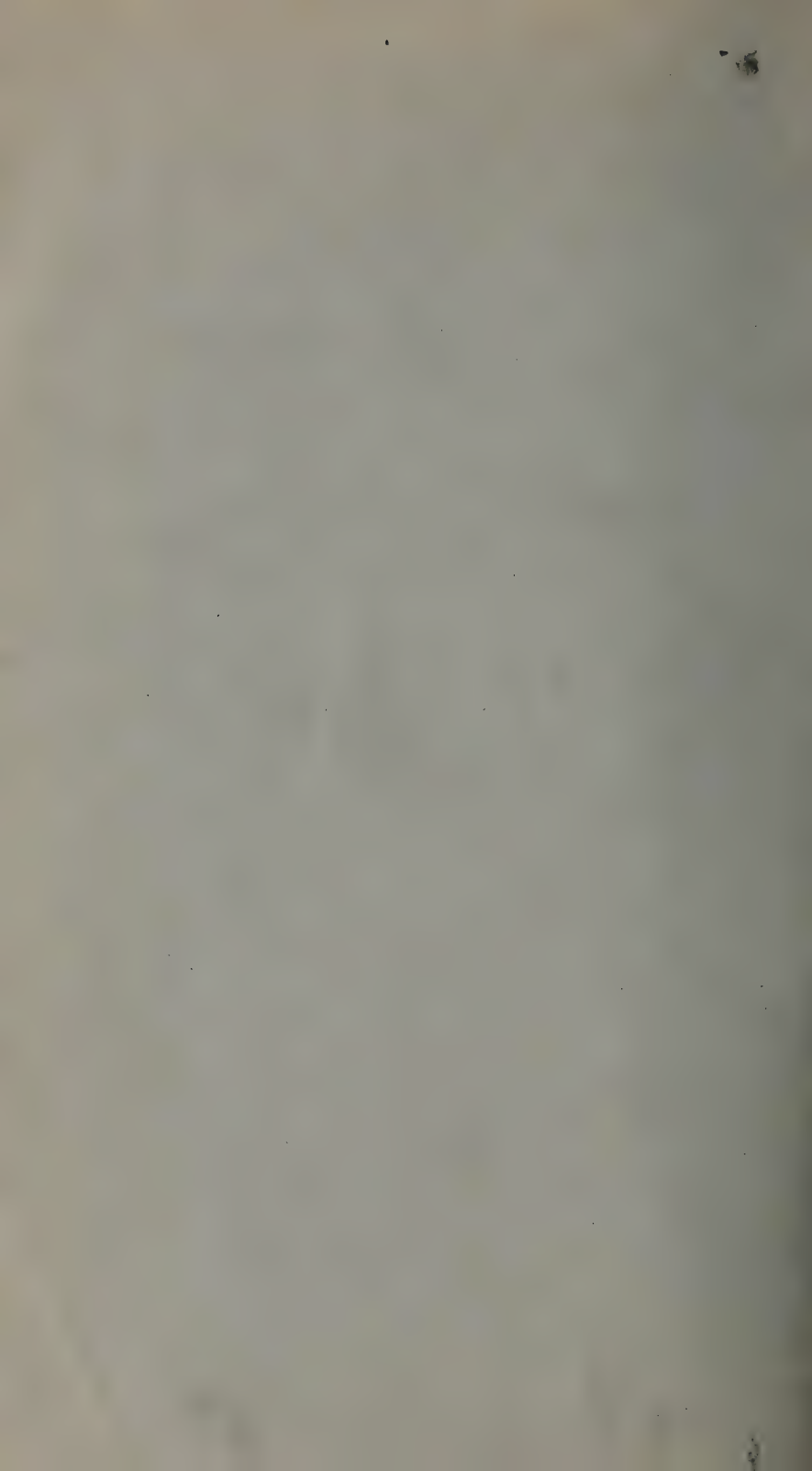
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